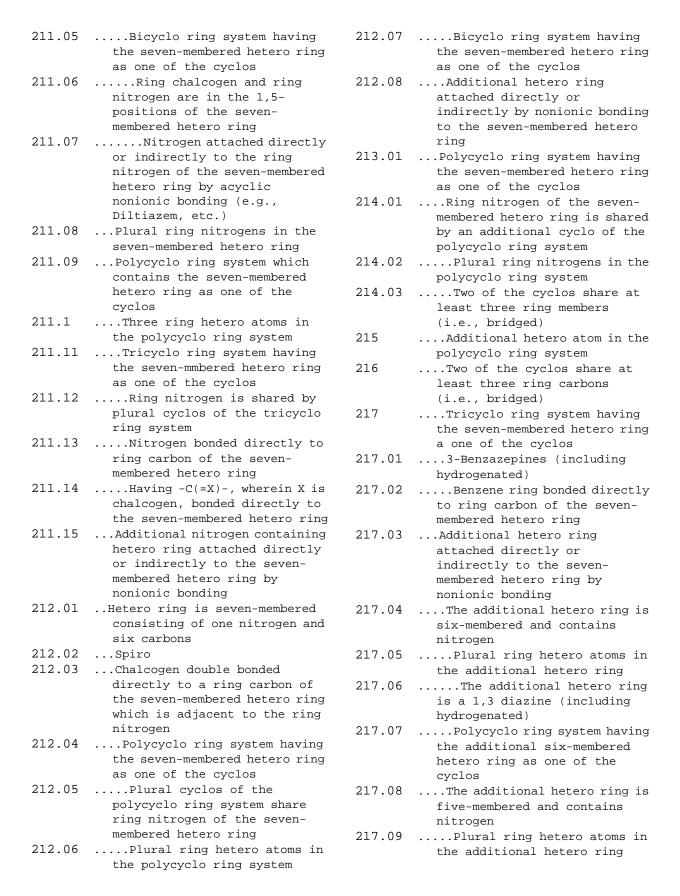
|          |                                    | 26   | $\ldots$ Cyclopentanohydrophenanthrene              |
|----------|------------------------------------|------|---|
| This Cla | ass 514 is considered to be an     |      | ring system   |
| integra  | l part of Class 424 (see the Class | 27   | Oxygen of the saccharide                            |
| 424 sch  | edule for the position of this     |      | radical bonded directly to a                        |
| Class i  | n schedule hierarchy). This Class  |      | nonsaccharide hetero ring or a                      |
| retains  | all pertinent definitions and      |      | polycyclo ring system which                         |
| class l  | ines of Class 424.                 |      | contains a nonsaccharide                            |
|          |                                    |      | hetero ring   |
|          |                                    | 28   | The hetero ring has 8 or more                       |
|          |                                    |      | ring carbons  |
| 1        | DEGLESS HED ODGINIC LEHTUE         | 29   | The hetero ring has exactly                         |
| 1        | DESIGNATED ORGANIC ACTIVE          |      | 13 ring carbons (e.g.,                              |
|          | INGREDIENT CONTAINING (DOAI)       |      | erythromycin, etc.)                                 |
| 2        | .Peptide containing (e.g.,         | 30   | The hetero ring has exactly                         |
|          | protein, peptones, fibrinogen,     | 30   | 15 ring carbons                                     |
| _        | etc.) DOAI                         | 31   | The hetero ring has 20 or                           |
| 3        | Insulin or derivative              | 31   |   |
| 4        | With an additional active          |      | <pre>more ring carbons (e.g., nystatin, etc.)</pre> |
|          | ingredient                         | 32   | _   |
| 5        | Iodine containing                  | 34   | Oxygen of the saccharide                            |
| 6        | Heavy metal containing (e.g.,      |      | radical bonded to a                                 |
|          | hemoglobin, etc.)                  |      | nonsaccharide hetero ring by                        |
| 7        | Phosphorus containing              | 33   | acyclic carbon bonding                              |
| 8        | Glycoprotein (carbohydrate         | 33   | Oxygen of the saccharide                            |
|          | containing)                        |      | radical bonded directly to a                        |
| 9        | Cyclopeptides                      |      | polycyclo ring system of three                      |
| 10       | Bicyclic                           | 34   | or more carbocyclic rings                           |
| 11       | Monocyclic                         | 34   | Oxygen of the saccharide                            |
| 12       | 25 or more peptide repeating       |      | radical bonded directly to a                        |
|          | units in known peptide chain       |      | polycyclo ring system of four                       |
|          | structure                          |      | carbocyclic rings (e.g.,                            |
| 13       | 16 to 24 peptide repeating         | 35   | daunomycin, etc.)                                   |
|          | units in known peptide chain       | 35   | Oxygen of the saccharide                            |
| 14       | 12 to 15 peptide repeating         |      | radical bonded directly to a                        |
|          | units in known peptide chain       | 26   | cyclohexyl ring                                     |
| 15       | 9 to 11 peptide repeating units    | 36   | Two or more nitrogen atoms                          |
|          | in known peptide chain             |      | bonded directly to the                              |
| 16       | 7 or 8 peptide repeating units     | 2.17 | cyclohexyl ring                                     |
| 10       | in known peptide chain             | 37   | The nitrogen atoms are in N-                        |
| 17       | 5 or 6 peptide repeating units     |      | C(=N)-N groups (e.g.,                               |
| Ι,       | in known peptide chain             | 2.0  | streptomycin, etc.)                                 |
| 18       | 3 or 4 peptide repeating units     | 38   | Two saccharide radicals                             |
| 10       | in known peptide chain             |      | bonded through only oxygen to                       |
| 19       |                                    |      | adjacent ring carbons of the                        |
| 19       | 2 peptide repeating units in       | 2.0  | cyclohexyl ring                                     |
| 20       | known peptide chain                | 39   | Three or more saccharide                            |
| 20       | Guanidine containing               |      | radicals (e.g., neomycin,                           |
| 21       | Produced by or extracted from      | 4.0  | etc.)   |
|          | animal tissue                      | 40   | Two saccharide radicals                             |
| 22       | .Lignin or derivative DOAI         |      | bonded through only oxygen to                       |
| 23       | .Carbohydrate (i.e., saccharide    |      | 4- and 6- positions of the                          |
|          | radical containing) DOAI           | 4.1  | cyclohexyl ring                                     |
| 24       | S-glycoside                        | 41   | Kanamycin or derivative                             |
| 25       | O-glycoside                        | 42   | N-glycoside   |
|          |                                    |      |   |

| 43  | Nitrogen containing hetero ring   | 76  | Amine addition salt of organic phosphorus containing acid |
|-----|---|-----|---|
| 44  | Polynucleotide (e.g., RNA, DNA, etc.)   | 77  | Inner salt (e.g., betaine, etc.)                          |
| 45  | Purines (including  | 78  | Lecithins   |
|     | hydrogenated) (e.g., adenine,   | 79  | Nitrogen containing hetero ring                           |
|     | guanine, etc.)  | 80  | Polycylo ring system having a                             |
| 46  | Adenosine or derivative   |     | ring nitrogen in the system                               |
| 47  | Phosphorus containing   | 81  | Nonshared hetero atoms in at                              |
| 48  | Phosphorus containing   |     | least two rings of the                                    |
| 49  | Pyrimidines (including  |     | polycyclo ring system                                     |
|     | hydrogenated) (e.g., cytosine, etc.)  | 82  | Quinolinyl or isoquinolinyl (including hydrogenated)      |
| 50  | 2,4-diketone pyrimidine or  | 83  | Hetero ring is three-membered                             |
|     | derivative (e.g., uracil, etc.)   |     | consisting of one nitrogen and two carbons                |
| 51  | Phosphorus containing   | 84  | Hetero ring is six-membered                               |
| 52  | Phosphorus containing (e.g.,  | 01  | consisting of three nitrogens                             |
| 32  | Vitamin B12, etc.)  |     | and three carbons   |
| 53  | Dissacharide  | 85  | Hetero ring is six-membered                               |
| 54  | Polysaccharide  | 05  | consisting of two nitrogens                               |
| 55  | Chitin or derivative  |     | and four carbons  |
| 56  | Heparin or derivative   | 86  | Nitrogen atoms occupy 1 and                               |
| 57  | Cellulose or derivative   |     | 3- positions  |
| 58  | Dextrin or derivative   | 87  | PX- bonded directly to 1,3-                               |
| 59  | Dextrin or derivative   | 0 / | diazine at 2- position (X is                              |
| 60  | Starch or derivative  |     | chalcogen)  |
| 61  | Tri- or tetrasaccharide   | 88  | Two or more PX- groups                                    |
| 62  | Glucosamine or derivative   |     | attached to the same 1,3-                                 |
|     |   |     | diazine (X is chalcogen)                                  |
| 63  | Silicon containing DOAI   | 89  | Hetero ring is six-membered                               |
| 64  | .Boron containing DOAI  |     | and includes only one ring                                |
| 65  | .Pyrethrum plant derived material   |     | nitrogen  |
|     | or plant derived rotenone   | 90  | Chalcogen in the six-membered                             |
| 66  | compound containing DOAI  |     | hetero ring   |
|     | With heterocyclic compound  | 91  | Hetero ring is five-membered                              |
| 67  | Methylenedioxyphenyl group  | 92  | Two or more hetero atoms in                               |
|     | <pre>containing (e.g., piperonyl butoxide, etc.)</pre>  |     | the five-membered ring                                    |
| 68  | With carboxylic acid ester  | 93  | Triazoles (including                                      |
| 69  | With carboxylic acid metal salt   |     | hydrogenated)   |
| 70  |   | 94  | Diazoles (including                                       |
| 70  | With organic nitrogen   |     | hydrogenated)   |
| 71  | containing compound   | 95  | Sulfur containing hetero ring                             |
| 71  | Sulfur containing organic   | 96  | Polycyclo ring system having                              |
| 72  | nitrogen compound   |     | the hetero ring as one of the                             |
| 1 4 | With organic oxygen containing  |     | cyclos  |
| 72  | compound  | 97  | Two or more sulfurs in the                                |
| 73  | Phosphorus or halogen   |     | hetero ring   |
|     | containing organic oxygen   | 98  | Oxygen in the hetero ring                                 |
| 71  | compound  | 99  | Oxygen containing hetero ring                             |
| 74  | With hydrocarbon or   | 100 | Polycyclo ring system having                              |
| 75  | halohydrocarbon   | -   | the hetero ring as one of the                             |
| /5  | .Phosphorus containing other than<br>solely as part of an inorganic<br>ion in an addition salt DOAI |     | cyclos  |

| 101 | Two or more oxygen in the hetero ring                       | 126   | Sulfur not bonded directly to phosphorus |
|-----|---|-------|--|
| 102 | Two or more phosphorus atoms directly or indirectly bonded  | 127   | Thioether, sulfoxide or sulfone          |
|     | together by only covalent bonds                             | 128   | Sulfur bonded directly to a              |
| 103 | Phosphorus acid ester of                                    | 100   | benzene ring                             |
| 103 | <u>-</u>  | 129   | Oxygen bonded directly to a              |
|     | polyhydric alcohol or                                       |       | carbon or hydrogen and wherein           |
|     | thioalcohol (e.g., P-X-R-X-P                                |       | the oxygen is not bonded                 |
|     | group, etc., wherein X is                                   | 100   | directly to phosphorus                   |
|     | chalcogen and R is the residue of the polyhydric alcohol or | 130   | The oxygen is bonded directly            |
|     | thioalcohol)  | 1 2 1 | to a benzene ring                        |
| 104 | Benzene ring in the alcohol                                 | 131   | Nitro group bonded to a carbon           |
| 104 | moiety  | 132   | Nitro group is directly bonded           |
| 105 | -   |       | to a benzene ring which                  |
| 105 | Phosphorus is part of a ringP-O-P or P-S-P containing       |       | benzene ring is either bonded            |
| 100 |   |       | directly bonded to phosphorus            |
| 107 | (e.g., anhydrides, etc.)Benzene ring containing             |       | or indirectly bonded to                  |
| 107 | 3   | 1 2 2 | phosphorus through a chalcogen           |
| 100 | Acyclic and contains at least one carbon atom between the   | 133   | Two or more such benzene                 |
|     | phosphorus atoms  | 134   | rings                                    |
| 109 | P-X-X containing (X is                                      | 134   | Acyclic carbon to carbon unsaturation    |
| 109 | chalcogen)  | 135   |  |
| 110 | Phosphorus is part of a ring                                | 136   | Alkyne                                   |
| 111 | Polycyclo ring system having                                | 130   | Phosphate ester having three             |
| 111 | the phosphorus containing ring                              |       | ester groups (e.g., DDVP, etc.)          |
|     | as one of the cyclos  | 137   | Nitrogen bonded directly to              |
| 112 | Cyano or isocyano containing                                | 137   | phosphorus                               |
| 113 | Cyano or isocyano bonded                                    | 138   | N-P-N or N-N-P containing                |
| 113 | directly to a benzene ring                                  | 139   | Phosphorus bonded directly to            |
| 114 | Nitrogen, other than nitro or                               | 137   | halogen                                  |
|     | nitroso, bonded indirectly to                               | 140   | (C)(R)P=X(-XC) containing                |
|     | phosphorus  | 110   | (i.e., Phosphinate (X is                 |
| 115 | N-C(=X)-N containing (X is                                  |       | chalcogen; R is C or H)                  |
|     | chalcogen)  | 141   | (CX-) (C)P=X(XH) or (CX-)                |
| 116 | Sulfur single bonded directly                               |       | (R)P=X(XC) containing (e.g.,             |
|     | to nitrogen   |       | phosphonate, etc.) (X is                 |
| 117 | $\dots$ N-(O=)S(=O) containing (i.e.,                       |       | chalcogen; R is C or H)                  |
|     | sulfonamides)   | 142   | (CX-)(C)P(C),(CX-)(RX-                   |
| 118 | Phosphorus single bonded                                    |       | )P(C),(CX-)P(XH)(XH) or (CX-             |
|     | directly to nitrogen  |       | )(CX-)P(-XR) containing (X is            |
| 119 | C(=0)N containing   |       | chalcogen; R is C or H) (e.g.,           |
| 120 | C=O other than as ketone or                                 |       | phosphinite, phosphite, etc.)            |
|     | aldehyde, attached directly or                              | 143   | Ester of $(HX)P=X(XH)(XH)$ (X is         |
|     | indirectly to phosphorus                                    |       | chalcogen) (e.g., phosphate,             |
| 121 | Plural C=O groups, other than                               |       | etc.)                                    |
|     | as ketone or aldehyde                                       | 144   | Triester                                 |
| 122 | Malathion   | 145   | Three benzene rings bonded               |
| 123 | With N-C(=0)-O containing                                   |       | directly to chalcogen                    |
|     | compound  | 146   | Two benzene rings bonded                 |
| 124 | C=O, other than as ketone or                                |       | directly to chalcogen                    |
|     | aldehyde, attached to a                                     | 147   | One benzene ring bonded                  |
|     | benzene ring  |       | directly to chalcogen                    |
| 125 | Ketone or aldehyde containing                               | 148   | Diester                                  |
|     |   |       |  |

| 149                 | .Azoxy DOAI                       | 173         | Spiro ring system                    |
|---------------------|-----------------------------------|-------------|--------------------------------------|
| 150                 | .Acyclic nitrogen double bonded   | 174         | $\dots$ -0-C-0- is part of a hetero  |
|                     | to acyclic nitrogen, acyclic      |             | ring (e.g., acetonide, etc.)         |
|                     | nitrogen triple bonded to         | 175         | $\dots$ -C(=0)-O-is part of a hetero |
|                     | acyclic nitrogen or azide DOAI    |             | ring (e.g., lactone, etc.)           |
| 151                 | Acyclic C-N=N-N containing        | 176         | Nitrogen containing hetero           |
| 152                 | .3,10-dihydroxy-2-naphthacene     |             | ring                                 |
|                     | carboxamide or derivative         | 177         | Oxygen double bonded to a ring       |
|                     | (e.g., tetracycline, etc.)        | ± / /       | carbon of the                        |
|                     | DOAI                              |             | cyclopentanohydrophenanthrene        |
| 153                 | With stabilizer or preservative   |             | ring system                          |
| 154                 | With an additional active         | 178         | Oxygen single bonded to a ring       |
| 131                 | ingredient (excludes reaction     | 170         | carbon of the                        |
|                     | product or complex)               |             |                                      |
| 155                 | .Para-N-benzene - sulfoxy-N       |             | cyclopentanohydrophenanthrene        |
| 133                 | <del>-</del>                      | 179         | ring system                          |
|                     | containing DOAI, and said         | 1/9         | Modified C-ring (except              |
|                     | benzene ring is not part of a     |             | methyl in 13-position) (e.g.,        |
| 156                 | polycyclo ring system             |             | double bond containing,              |
| 156                 | Hetero ring containing            | 100         | substituted, etc.)                   |
| 157                 | The hetero ring is six-           | 180         | 9-position substituted               |
|                     | membered and includes at least    | 181         | 21-position substituted              |
|                     | two nitrogens and no other        | 182         | Oxygen single bonded to a ring       |
|                     | hetero atoms                      |             | carbon of the                        |
| 158                 | The hetero ring is five-          |             | cyclopentanohydrophenanthrene        |
|                     | membered                          |             | ring system                          |
| 159                 | .Ortho-hydroxybenzoic acid (i.e., | 183         | .Heterocyclic carbon compounds       |
|                     | salicyclic acid) or derivative    |             | containing a hetero ring             |
|                     | DOAI                              |             | having chalcogen (i.e., 0,S,Se       |
| 160                 | With additional ortho-            |             | or Te) or nitrogen as the only       |
|                     | hydroxybenzoic acid compound      |             | ring hetero atoms DOAI               |
| 161                 | With heterocyclic compound        | 184         | Heavy metal containing               |
| 162                 | With organic nitrogen             |             | (including salts)                    |
|                     | containing compound               | 185         | Polycyclo ring system                |
| 163                 | With carboxylic acid, ester or    | 186         | Bicyclo ring system                  |
|                     | metal salt thereof                | 187         | Quinolines or isoquinolines          |
| 164                 | With organic oxygen containing    |             | (including hydrogenated)             |
|                     | compound                          | 188         | Hetero ring is six-membered          |
| 165                 | Aspirin per se (i.e., 2-          |             | consisting of one nitrogen and       |
|                     | (acetyloxy)benozic acid)          |             | five carbons                         |
| 166                 | Nitrogen containing (e.g.,        | 189         | Tin                                  |
|                     | anilides, etc.)                   | 190         | Mercury                              |
| 167                 | .9,10-seco-                       | 191         | Aluminum (including salts)           |
|                     | cyclopentanohydrophenanthrene     | 192         | 1-thia-4-aza-bicyclo (3.2.0)         |
|                     | ring system (e.g., vitamin D,     |             | heptane ring containing              |
|                     | etc.) DOAI                        |             | (including dehydrogenated)           |
| 168                 | With a vitamin type active        |             | (e.g., penicillins, etc.)            |
| 100                 | ingredient                        | 193         | Spiro or additional polycyclo        |
| 169                 | .Cyclopentanohydrophenanthrene    | 100         | ring system                          |
| 107                 | ring system DOAI                  | 194         | 6,6-di-substituted                   |
| 170                 | Plural Compounds containing       | 195         | 3-position substituent               |
| 1/0                 | cyclopentanohydrophenanthrene     | 100         | contains -COOC- group                |
|                     | ring systems                      | 196         | 6-position substituent               |
| 171                 | With additional active            | 170         | contains hetero ring                 |
| <b>1</b> / <b>1</b> | ingredient                        | 197         | 6-position substituent               |
| 172                 |                                   | 1 <i>31</i> | contains carbocyclic ring            |
| 1/4                 | Hetero ring containing            |             | Concarns CarbodyClic fing            |

| 198    | Ampicillin per se or salt thereof                   | 210.1  | Sulfur bonded directly to the five-membered cyclo of the |
|--------|---|--------|--|
| 199    | Penicillin G per se or salt thereof (e.g., procaine |        | <pre>bicyclo ring system (e.g., thienamycin, etc.)</pre> |
|        | pencillin G, etc.)                                  | 210.11 | Additional hetero ring                                   |
| 200    | 1-thia-5-aza-bicyclo (4.2.0)                        |        | attached directly to the                                 |
| 200    |   |        | sulfur   |
|        | octane ring containing                              | 010 10 |  |
|        | (including dehydrogenated)                          | 210.12 | The additional hetero                                    |
|        | <pre>(e.g., cephalosporins, etc.)</pre>             |        | ring contains ring nitrogen                              |
| 201    | 7,7-di-substituted                                  | 210.13 | $\dots$ Having -C(=X)-, wherein                          |
| 202    | Additional hetero ring                              |        | X is chalcogen, bonded                                   |
| 203    | 3-position substituent                              |        | directly to the additional                               |
|        | contains pyridine ring                              |        | hetero ring  |
| 204    | 3-position substituent                              | 210.14 | Polycyclo ring system                                    |
| 204    | _   | 210.11 | bonded directly to the five-                             |
|        | contains sulfur                                     |        | <u>-</u>   |
| 205    | The additional hetero ring                          |        | membered cyclo of the bicyclo                            |
|        | is part of a polycyclo ring                         | 010 15 | ring system  |
|        | system  | 210.15 | Chalcogen bonded directly to                             |
| 206    | 7-position substituent                              |        | the ring nitrogen of the four-                           |
|        | contains hetero ring                                |        | membered ring  |
| 207    | Alkyl, hydroxyalkyl,                                | 210.16 | Polycyclo ring system having                             |
|        | alkoxyalkyl or alkanoyloxyakyl                      |        | the four-membered hetero ring                            |
|        | bonded directly to 3-position                       |        | as one of the cyclos                                     |
| 208    | Sulfur containing substituent                       | 210.17 | Having $-C(=X)-$ , wherein X is                          |
| 209    | _   |        | chalcogen, bonded directly to                            |
| 209    | Alkyl, hydroxyalkyl,                                |        | the four-membered hetero ring                            |
|        | alkoxyalkyl, or                                     | 210.18 | Additional hetero ring                                   |
|        | alkanoyloxyakyl bonded                              | 210.10 | attached directly or                                     |
|        | directly to 3-position                              |        |  |
| 210.01 | Hetero ring is four-membered                        |        | indirectly to the four-                                  |
|        | and includes at least one ring                      |        | membered hetero ring by                                  |
|        | nitrogen  |        | nonionic bonding   |
| 210.02 | Chalcogen double bonded                             | 210.19 | Additional hetero ring                                   |
|        | directly to a ring carbon of                        |        | attached directly or                                     |
|        | the four-membered hetero ring                       |        | indirectly to the four-                                  |
|        | which is adjacent to the ring                       |        | membered hetero ring by                                  |
|        | nitrogen  |        | nonionic bonding   |
| 210.03 | Polycyclo ring system having                        | 210.2  | The additional hetero ring                               |
|        | the four-membered hetero ring                       |        | contains ring nitrogen                                   |
|        | as one of the cyclos                                | 210.21 | Polycyclo ring system having                             |
| 210.04 | Bicyclo ring system having                          |        | the additional hetero ring as                            |
| 210.04 |   |        | one of the cyclos  |
|        | the four-membered hetero ring                       | 211.01 | Hetero ring contains seven                               |
| 010 05 | as one of the cyclos                                | 211.01 | members including nitrogen,                              |
| 210.05 | Plural ring hetero atoms in                         |        | carbon and chalcogen                                     |
|        | the bicyclo ring system                             | 011 00 |  |
| 210.06 | Ring oxygen in the bicyclo                          | 211.02 | Monocyclic cyclopentyl ring                              |
|        | ring system   |        | bonded directly to the seven-                            |
| 210.07 | The other cyclo of the                              |        | membered hetero ring (e.g.,                              |
|        | bicyclo ring system is six-                         |        | prostaglandins, etc.)                                    |
|        | membered  | 211.03 | Chalcogen double bonded                                  |
| 210.08 | 1-oxa-5-aza-bicyclo                                 |        | directly to a ring carbon                                |
|        | (4.2.0) octanes (including                          |        | which is adjacent to the ring                            |
|        | unsaturated)  |        | nitrogen   |
| 210.09 | The other cyclo of the                              | 211.04 | Polycyclo ring system which                              |
|        | bicyclo ring system is five-                        |        | contains the seven-membered                              |
|        | membered  |        | hetero ring as one of the                                |
|        | member ea   |        | cyclos   |
|        |   |        |  |



| 015 1      | m                               | 006.0 | en 7                            |
|------------|---------------------------------|-------|---------------------------------|
| 217.1      | Chalcogen is one of the         | 226.2 | Chalcogen or nitrogen           |
| 015 11     | ring hetero atoms               |       | attached indirectly to the      |
| 217.11     | Nitrogen or C(=X), wherein X    |       | phenothiazine ring nitrogen by  |
|            | is chalcogen, bonded directly   | 226 5 | acyclic nonionic bonding        |
|            | to the seven-membered hetero    | 226.5 | One of the cyclos is a 1,2-     |
| 0.1 = .1.0 | ring                            |       | thiazine (e.g.,1,2-             |
| 217.12     | Nitrogen or C(=X), wherein X    | 0010  | benzothiazines, etc.)           |
|            | is chalcogen, attached          | 226.8 | 1,3-Thiazines                   |
|            | indirectly to the seven-        | 227.2 | Chalcogen or nitrogen bonded    |
|            | membered hetero ring by         |       | directly to ring carbon of the  |
|            | acyclic nonionic bonding        |       | six-membered hetero ring        |
| 218        | Hetero ring is seven-membered   | 227.5 | 1,4-Thiazines                   |
|            | consisting of two nitrogens     | 227.8 | Additional hetero ring          |
|            | and five carbon atoms           |       | attached directly or            |
| 219        | Polycyclo ring system having    |       | indirectly to the 1,4-thiazine  |
|            | the seven-membered hetero ring  |       | by nonionic bonding             |
|            | as one of the cyclos            | 228.2 | Polycyclo ring system having    |
| 220        | Tricyclo ring system having     |       | the additional hetero ring as   |
|            | the seven-membered hetero ring  |       | one of the cyclos               |
|            | as one of the cyclos            | 228.5 | Three or more ring hetero       |
| 221        | Bicyclo ring system having      |       | atoms in the polycyclo ring     |
|            | the seven-membered hetero ring  |       | system                          |
|            | as one of the cyclos            | 228.8 | Hetero ring is six-membered and |
| 222.2      | Hetero ring is six-membered and |       | includes at least nitrogen and  |
|            | includes at least nitrogen and  |       | oxygen as ring hetero atoms     |
|            | sulfur as ring members          |       | (e.g., monocyclic $1,2-$ and    |
| 222.5      | Three or more ring hetero       |       | 1,3-oxazines, etc.)             |
|            | atoms in the six-membered       | 229.2 | Three or more ring hetero       |
|            | hetero ring                     |       | atoms in the six-membered       |
| 222.8      | Polycyclo ring system having    |       | hetero ring                     |
|            | the six-membered hetero ring    | 229.5 | Polycyclo ring system having    |
|            | as one of the cyclos            |       | the six-membered hetero ring    |
| 223.2      | 1,2,4 - Benzothiadiazine -      |       | as one of the cyclos (e.g.,     |
|            | 1,1 - dioxides (including       |       | maytansinoids, etc.)            |
|            | hydrogenated)                   | 229.8 | Tricyclo ring system having     |
| 223.5      | With additional active          |       | the six-membered hetero ring    |
|            | ingredient                      |       | as one of the cyclos            |
| 223.8      | 1,3,5-Thiadiazines              | 230.2 | Ring nitrogen shared by two     |
| 224.2      | Polycyclo ring system having    |       | of the cyclos                   |
|            | the six-membered hetero ring    | 230.5 | Bicyclo ring system having      |
|            | as one of the cyclos (e.g.,     |       | the six-membered hetero ring    |
|            | 1,3- and 1,4- benzothiazines,   |       | as one of the cyclos (e.g.,     |
|            | etc.)                           |       | 1,4-benzoxazines, etc.)         |
| 224.5      | At least three cyclos in the    | 230.8 | Chalcogen bonded directly to    |
|            | polycyclo ring system           |       | ring carbon of 1,4-oxazine      |
| 224.8      | Phenothiazines (including       |       | ring                            |
|            | hydrogenated)                   | 231.2 | Morpholines (i.e., fully        |
| 225.2      | Hetero ring attached            |       | hydrogenated 1,4- oxazines)     |
|            | directly or indirectly to the   | 231.5 | Additional hetero ring          |
|            | phenothiazine ring nitrogen by  |       | attached directly or            |
|            | acyclic nonionic bonding        |       | indirectly to the morpholine    |
| 225.5      | The hetero ring is              |       | ring by nonionic bonding        |
|            | monocyclic piperidine           | 231.8 | Plural morpholine rings         |
| 225.8      | The hetero ring contains        |       | attached directly or            |
|            | plural ring nitrogens           |       | indirectly to each other by     |
|            | -                               |       | nonionic bonding                |
|            |                                 |       |                                 |

| 232.2 | Additional hetero ring attached directly or  | 238.5            | The nitrogen is double or triple bonded directly to carbon   |
|-------|--|------------------|--|
| 232.5 | <pre>indirectly to the morpholines by nonionic bondingPolycyclo ring system having the additional hetero</pre> | 238.8            | Chalcogen attached indirectly to the morpholine ring by acyclic nonionic bonding                     |
| 232.8 | ring as one of the cyclosPolycyclo ring system having  | 239.2            | The chalcogen is bonded directly to two carbon atoms   |
|       | the additional hetero ring as one of the cyclos  | 239.5            | Carbocyclic ring attached indirectly to the morpholine   |
| 233.2 | Ring nitrogen shared by two of the cyclos  | 241              | ring by nonionic bondingHetero ring is six-membered  |
| 233.5 | <pre>Bicyclo ring system having   the additional hetero ring as   one of the cyclos</pre>                      | 242              | consisting of three nitrogens and three carbon atomsAsymmetrical (e.g., 1,2,4-                       |
| 233.8 | Plural ring hetero atoms   |                  | triazine, etc.)  |
| 234.2 | <pre>in the bicyclo ring systemThree or more ring hetero atoms in the bicyclo ring</pre>                       | 243              | <pre>Polycyclo ring system having   the hetero ring as one of the   cyclos</pre>                     |
|       | system   | 244              | Hexamethylenetetramines  |
| 234.5 | Plural ring nitrogens in the bicyclo ring system   | 245              | Nitrogen bonded directly to ring carbon of the hetero ring   |
| 234.8 | <pre>Quinoxalines (including hydrogenated)</pre>   | 246              | Polycyclo ring system having a 1,3,5-triazine as one of the  |
| 235.2 | Ring nitrogen in the   | 0.45             | cyclos   |
| 235.5 | bicyclo ring systemRing nitrogen in the additional hetero ring   | 247              | Hetero ring is six-membered<br>consisting of two nitrogens<br>and four carbon atoms (e.g.,           |
| 235.8 | <pre>Plural ring nitrogens in   the additional hetero ring   (e.g., imidazole, pyrazine,   etc.)</pre>         | 248              | <pre>pyridazines, etc.)Polycyclo ring system having a 1,2- or 1,4-diazine as one of the cyclos</pre> |
| 236.2 | Three or more ring hetero atoms in the additional hetero   | 249              | 1,4-diazine as one of the cyclos   |
|       | ring   | 250              | At least three rings in the  |
| 236.5 | The ring nitrogens are   |                  | polycyclo ring system  |
|       | <pre>bonded directly to each other (e.g., pyridazine, etc.)</pre>  | 251              | Isoalloxazine (e.g., riboflavins, Vitamin B2, etc.)  |
| 236.8 | Ring chalcogen in the additional hetero ring (e.g., oxazole, etc.)   | 252.01           | 1,2 diazine attached directly or indirectly to an additional hetero ring by nonionic                 |
| 237.2 | The additional hetero ring is attached indirectly to the   | 252 02           | bonding  |
|       | morpholine ring by an acyclic chain having a hetero atom as  | 252.02<br>252.03 | The additional hetero ring is a diazine  |
| 227 5 | a chain member   | 252.03           | The additional hetero ring is six-membered consisting of one   |
| 237.5 | Having -C(=X)-, wherein X is chalcogen, bonded directly to the morpholine ring                                 | 252.04           | nitrogen and five carbon atomsPolycyclo ring system having the additional six-membered               |
| 237.8 | Nitrogen attached indirectly to the morpholine ring by   |                  | hetero ring as one of the cyclos   |
| 238.2 | acyclic nonionic bondingChalcogen attached directly to the nitrogen by nonionic bonding                        | 252.05           | The additional hetero ring is a five-membered nitrogen hetero ring                                   |

| 252.06          | Polycyclo ring system having<br>the additional five-membered<br>hetero ring as one of the<br>cyclos | 253.04 | Bicyclo ring having the additional six-membered nitrogen hetero ring as one of the cyclos          |
|-----------------|---|--------|--|
| 252.1<br>252.11 | 1,4 diazinesPlural 1,4-diazine rings  | 253.05 | Isoquinolines (including hydrogenated)   |
| 202111          | attached directly or indirectly to each other by  | 253.06 | Quinolines (including hydrogenated)  |
| 252.12          | nonionic bondingPiperazines (i.e., fully  | 253.07 |  |
|                 | hydrogenated 1,4-diazines)  |        | hetero ring of the quinoline   |
| 252.13          | Additional hetero ring attached directly or   | 253.08 | ring systemHaving -C(=X)-,   |
|                 | indirectly to the piperazine ring by nonionic bonding   | 233.00 | wherein X is chalcogen, bonded directly to carbon of the   |
| 252.14          | The additional hetero ring is a 1,3 diazine ring  |        | hetero ring of the quinoline ring system   |
| 252.15          | Spiro ring system   | 253.09 | Five-membered nitrogen   |
|                 | containing  |        | hetero ring attached directly  |
| 252.16          | having the additional 1,3-  |        | or indirectly to the piperazine ring by nonionic bonding   |
|                 | diazine ring as one of the cyclos   | 253.1  | The five-membered  |
| 252.17          | The polycyclo ring system is quinazoline (including   |        | nitrogen hetero ring has chalcogen as a ring member  |
|                 | hydrogenated)   | 253.11 | Chalcogen hetero ring  |
| 252.18          | Additional six-membered hetero ring consisting of five  |        | attached directly or indirectly to the piperazine  |
|                 | ring carbons and one ring   |        | ring by nonionic bonding   |
|                 | nitrogen attached directly or indirectly to the 1,3-diazine   | 253.12 | Chalcogen bonded directly to ring carbon of the  |
| 252.19          | by nonionic bondingFive-membered nitrogen   |        | additional six-membered nitrogen containing hetero   |
|                 | hetero ring attached directly   | 253.13 | ringHaving -C(=X)-, wherein X  |
|                 | or indirectly to the 1,3-<br>diazine ring by nonionic<br>bonding                                    | 233.13 | is chalcogen, bonded directly to the additional six-membered                                       |
| 252.2           | Oxygen hetero ring  | 254 01 | nitrogen hetero ring   |
|                 | attached directly or indirectly to the 1,3-diazine ring by nonionic bonding                         | 254.01 | <pre>The additional hetero ring   is five-membered having ring   nitrogen</pre>                    |
| 253.01          | The additional hetero ring  | 254.02 | The additional five-   |
|                 | is six-membered consisting of one nitrogen and five carbon  |        | membered hetero ring also has chalcogen as a ring member   |
|                 | atoms   | 254.03 | The additional five-   |
| 253.02          | <pre>Polycyclo ring system having the additional six- membered nitrogen hetero ring</pre>           |        | <pre>membered hetero ring consists   of two ring carbons, two ring   nitrogens, and one ring</pre> |
|                 | as one of the cyclos  |        | chalcogen (e.g., oxadiazolyl,  |
| 253.03          | Tricyclo ring system having the additional six- membered nitrogen hetero ring as one of the cyclos  |        | thiadiazolyl, etc.)  |
|                 | as one of one eyelob  |        |  |

| 254.04 | The additional five-<br>membered hetero ring consists<br>of three ring carbons, and of        | 255.06 | Nitrogen or -C(=X)-, wherein X is chalcogen, bonded directly to ring carbon of the   |
|--------|---|--------|--|
|        | <pre>nitrogen and chalcogen in adjacent ring positions (e.g., isoxazolyl, isothiazolyl,</pre> | 256    | <pre>1,4-diazine ring1,3-diazines (e.g., pyrimidines, etc.)</pre>  |
| 254.05 | etc.)Plural nitrogens in the additional five-membered   | 257    | <pre>Polycyclo ring system having 1,3-diazine as one of the cyclos</pre>   |
| 254.06 | hetero ringPolycyclo ring system having the plural nitrogen                                   | 258.1  | <pre>Bicyclo ring system having   the 1,3-diazine as one of the   cyclos</pre>   |
|        | containing additional five-<br>membered hetero ring as one of<br>the cyclos                   | 259.1  | <pre>A ring nitrogen is shared by the two cyclos of the bicyclo ring system (e.g.,</pre>   |
| 254.07 | Chalcogen hetero ring attached directly or indirectly to the piperazine                       |        | <pre>pyrrolo [1,2-a]pyrimidine, imidazo[1,2-a]pyrimidine, etc.)</pre>  |
| 254.08 | ring by nonionic bondingPolycyclo ring system   | 259.2  | Ring chalcogen in the bicyclo ring system  |
|        | having the additional five-<br>membered nitrogen hetero ring<br>as one of the cyclos          | 259.3  | The shared ring nitrogen is bonded directly to a ring nitrogen of the second ring of   |
| 254.09 | Indole ring system (including hydrogenated) attached directly or                              |        | <pre>the bicyclo ring system (e.g., pyrazolo[1,5-a]pyrimidine, etc.)</pre>   |
| 254.1  | indirectly to the piperazine ring by nonionic bonding   | 259.31 | The second ring of the bicyclo ring system is a five-  |
| 254.1  | Ring oxygen in the additional hetero ringPolycyclo ring system                                |        | <pre>membered hetero ring including three ring nitrogens (e.g., triazolo[1,5-a]pyrimidine,</pre>   |
|        | having the additional oxygen hetero ring as one of the cyclos                                 | 259.4  | etc.)The second ring of the  |
| 255.01 | Nitrogen or -C(=X)-, wherein X is chalcogen, bonded directly to the piperazine ring           |        | bicyclo ring system is six-<br>membered, consisting of five<br>ring carbons and the shared<br>ring nitrogen (e.g.,<br>pyrido[1,2-a]pyrimidine, etc.) |
| 255.02 | Chalcogen bonded directly to a piperazine ring carbon   | 259.41 | Additional hetero ring is attached directly or   |
| 255.03 | Carbocyclic ring bonded directly to the piperazine ring                                       | 259.5  | indirectly to the bicyclo ring system by nonionic bondingChalcogen bonded directly   |
| 255.04 | Plural carbocyclic rings bonded directly to the same  | 237.3  | to a ring carbon of the 1,3-<br>diazine ring   |
|        | acyclic carbon atom which is attached directly or indirectly to the piperazine                | 260.1  | Ring chalcogen in the bicyclo ring systemExactly five ring nitrogens   |
| 255.05 | ring by nonionic bondingAdditional hetero ring attached directly or                           |        | <pre>in the bicyclo ring system (e.g., triazolo[4,5- d]pyrimidine, etc.)</pre>   |
|        | indirectly to the 1,4-diazine ring by nonionic bonding  | 262.1  | Exactly four ring nitrogens in the bicyclo ring system   |
|        |   | 263.1  | Purine (including hydrogenated)  |

| 263.2            | Additional hetero ring attached directly or indirectly to the purine ring  | 263.4  | Nitrogen bonded directly to ring carbon of the purine ring system (e.g., adenine,  |
|------------------|--|--------|--|
| 263.21<br>263.22 | system by nonionic bondingThe additional hetero ring is a 1,3-diazine ring (including hydrogenated)The additional hetero | 264.1  | etc.)The other cyclo in the bicyclo ring system is a pyridine ring (including hydrogenated) (e.g.,                         |
| 062.02           | ring is six-membered consisting of one nitrogen and five carbons   | 264.11 | <pre>pyrido[2,3-d]pyrimidine, etc.)Nitrogen bonded directly to ring carbon of the 1,3-</pre>                               |
| 263.23           | The additional hetero ring consists of carbon and chalcogen as the only ring members                                     | 265.1  | <pre>diazine ring of the bicyclo   ring systemThe other cyclo in the   bicyclo ring system is a</pre>                      |
| 263.24           | The additional chalcogen containing hetero ring is part of a polycyclo ring system                                       |        | <pre>pyrrole ring (including hydrogenated) (e.g., pyrrolo[3,2-d]pyrimidine, etc.)</pre>                                    |
| 263.3            | <pre>Chalcogen bonded directly   to a ring carbon of the purine   ring system</pre>                                      | 266.1  | <pre>Quinazoline (including hydrogenated)(i.e., the second cyclo in the bicyclo ring</pre>                                 |
| 263.31           | <pre>With perservative,   stabilizer, or an additional   active ingredient</pre>   | 266.2  | <pre>system is an ortho-fused six- membered carbocycle)Additional hetero ring</pre>  |
| 263.32           | <pre>Nitrogen containing hetero ring in the perservative, stabilizer, or additional active ingredient</pre>              |        | attached directly or indirectly to the quinazoline ring system by nonionic bonding   |
| 263.33           |  | 266.21 | The additional hetero ring is six-membered consisting of one nitrogen and five carbons                                     |
| 263.34           |  | 266.22 | <pre>Piperidinyl or   tetrahydropyridylThe additional hetero</pre>   |
|                  | <pre>positions of the purine ring system (e.g., theophylline, etc.)</pre>  | 200.23 | ring is five-membered consisting of carbon and   |
| 263.35           | Nitrogen attached indirectly to the purine ring system by acyclic nonionic bonding                                       | 266.24 | plural nitrogens as the only ring membersThe additional hetero ring consists of carbon and                                 |
| 263.36           |  | 266.3  | chalcogen as the only ring membersChalcogen bonded directly  |
| 263.37           | bondingNitrogen bonded directly  | 200.3  | to a ring carbon of the 1,3-<br>diazine ring of the  |
|                  | <pre>to a ring carbon of the purine ring system (e.g., guanine, etc.)</pre>  | 266.31 | quinazoline ring systemCarbocyclic ring bonded directly to a ring carbon of  |
| 263.38           |  | 266.4  | the quinazoline ring systemNitrogen bonded directly to ring carbon of the 1,3- diazine ring of the quinazoline ring system |

| 267 | Tricyclo ring system having 1,3-diazine as one of the                              | 286        | Two of the cyclos share at least three ring members                                       |
|-----|--|------------|---|
| 268 | <pre>cyclosPerimidine (including hydrogenated)</pre>                               | 287        | <pre>(i.e., bridged)Three or more hetero atoms in the tetracyclo ring system</pre>        |
| 269 | Pyrimidines with chalcogen bonded directly to a ring carbon of said pyrimidine     | 288<br>289 | Ring carbon is shared by three of the cyclosTwo of the cyclos share at                    |
| 270 | <pre>moietyBarbituric acid or   derivative (including   thioanalogs)</pre>         | 290        | <pre>least three ring members (i.e., bridged) (e.g., morphinans, etc.)</pre>              |
| 271 | Two or more barbituric acid compounds or with an additional active ingredient      | 290        | Tricyclo ring system having the six-membered hetero ring as one of the cyclos             |
|     | or stabilizer  | 291        | <pre>Plural hetero atoms in the<br/>tricyclo ring system</pre>                            |
| 272 | Nitrogen bonded directly to the 1,3-diazine at 2-position                          | 292        | <pre>Plural ring nitrogens in the tricyclo ring system</pre>                              |
| 273 | <pre>The nitrogen is part of a hetero ring</pre>                                   | 293        | Three or more hetero atoms in the tricyclo ring system                                    |
| 274 | <pre>Chalcogen bonded directly to   pyrimidine at 2-position</pre>                 | 294        | <pre>Ring nitrogen is shared by two of the cyclos</pre>                                   |
| 275 | Nitrogen bonded directly to<br>the 1,3-diazine at 2-position<br>by a single bond   | 295        | <pre>Two of the cyclos share at   least three ring carbons   (i.e., bridged) (e.g.,</pre> |
| 276 | <pre>Thiamines (e.g., vitamin B1,   etc.)</pre>                                    | 296        | benzomorphans, etc.)Ring carbons shared by each   |
| 277 | Hetero ring is six-membered consisting of one nitrogen and five carbon atoms       | 297        | of the three cyclos (e.g., 1,8-naphthalimides, etc.)                                      |
| 278 | Spiro ring system  | 297        | <pre>Acridines (including   hydrogenated)</pre>   |
| 279 | Polycyclo ring system having the six-membered hetero ring                          | 298        | Phenanthridines (including hydrogenated)  |
| 280 | as one of the cyclosPentacyclo ring system having the six-membered hetero ring     | 299        | Bicyclo ring system having the six-membered hetero ring as one of the cyclos              |
|     | as one of the cyclos   | 300        | Plural hetero atoms in the  |
| 281 | <pre>Two of the cyclos share at   least three ring members   (i.e., bridged)</pre> | 301        | <pre>bicyclo ring systemRing sulfur in the bicyclo ring system</pre>                      |
| 282 | One of the five cyclos is five-membered and includes                               | 302        | Ring oxygen in the bicyclo ring system  |
| 000 | <pre>ring chalcogen (e.g., codeine, morphine, etc.)</pre>                          | 303        | Exactly three ring nitrogens in the bicyclo ring  |
| 283 | Ring nitrogen in the pentacyclo ring system is shared by five-membered cyclo       | 304        | <pre>systemTropanes (including nor or dehydro form)</pre>                                 |
|     | <pre>and six-membered cyclo (e.g., vincamine, etc.)</pre>                          | 305        | <pre>Quinuclidines (including   unsaturation)</pre>                                       |
| 284 | Tetracyclo ring system having the six-membered hetero ring as one of the cyclos    | 306        | <pre>Quinolizines (including<br/>hydrogenated)</pre>                                      |
| 285 | Plural hetero atoms in the tetracyclo ring system (e.g., acronycines, etc.)        | 307        | <pre>Isoquinolines (including   hydrogenated)</pre>                                       |

| 308 | Plural isoquinoline ring systems attached directly or indirectly to each other by     | 328   | Plural chalcogens bonded directly to ring carbons of                        |
|-----|---|-------|---|
| 309 | indirectly to each other by nonionic bondingChalcogen attached directly               | 329   | the piperidine ringNitrogen attached directly to the piperidine ring by     |
| 310 | to the six-membered hetero ring by nonionic bondingNitrogen, other than as            | 330   | <pre>nonionic bondingC=X bonded directly to the piperidine ring (X is</pre> |
|     | nitro or nitroso, attached directly to the isoquinoline ring system by nonionic       | 331   | <pre>chalcogen)Nitrogen attached indirectly to the piperidine ring by</pre> |
| 311 | <pre>bondingQuinolines (including hydrogenated)</pre>                                 | 332   | nonionic bondingPlural six-membered hetero rings consisting of one          |
| 312 | Chalcogen attached directly to the six-membered hetero                                | 333   | nitrogen and five carbon atomsAdditional hetero ring other                  |
| 313 | ring by nonionic bondingNitrogen, other than as                                       |       | than the six-membered hetero rings  |
|     | nitro or nitroso, attached<br>directly to the six membered<br>hetero ring by nonionic | 334   | The six-membered hetero rings are bonded directly to each other             |
| 314 | bondingAdditional hetero ring   | 335   | Chalcogen bonded directly to a ring carbon of the six-                      |
|     | attached directly or indirectly to the quinoline ring system by nonionic              | 336   | <pre>membered hetero ringAdditional hetero ring containing</pre>            |
| 315 | bonding<br>Piperidines  | 337   | The additional hetero ring is one of the cyclos in a                        |
| 316 | Plural piperidine rings   |       | polycyclo ring system   |
| 317 | Additional ring containing  | 338   | $\ldots$ .Plural hetero atoms in the  |
| 318 | The additional ring is a  |       | polycyclo ring system   |
|     | six-membered hetero ring<br>consisting of one nitrogen and<br>five carbon atoms       | 339   | Ring nitrogen in the polycyclo ring system                                  |
| 319 | The additional ring is one of the cyclos in a polycyclo                               | 340   | Ring nitrogen in the additional hetero ring (e.g., oxazole, etc.)           |
|     | ring system   | 341   | The additional hetero ring  |
| 320 | Hetero ring in the polycyclo ring system  |       | consists of two nitrogens and three carbons                                 |
| 321 | <pre>Plural hetero atoms in the polycyclo ring system</pre>                           | 342   | Ring sulfur in the additional hetero ring                                   |
| 322 | Plural ring nitrogens in the polycyclo ring system                                    | 343   | The additional hetero ring consists of one nitrogen and                     |
| 323 | Ring nitrogen in the polycyclo ring system  |       | <pre>four carbons (e.g., nicotine, etc.)</pre>                              |
| 324 | Ring sulfur in the polycyclo ring system  | 344   | Cyano bonded directly to the six-membered hetero ring                       |
| 325 | <pre>Polycyclo ring system is tricyclo-carbocyclic</pre>                              | 345   | Chalcogen bonded directly to ring carbon of the six-                        |
| 326 | <pre>The additional ring is a  hetero ring</pre>                                      | 346   | membered hetero ringChalcogen and acyclic                                   |
| 327 | Chalcogen bonded directly to ring carbon of the piperidine                            | 3 2 0 | nitrogen bonded directly to the same carbon                                 |
|     | ring  | 347   | Chalcogen bonded directly to chalcogen                                      |

| 348 | Chalcogens bonded directly to<br>at least two ring carbons of<br>the six-membered hetero ring | 368  | <pre>Ring nitrogen is shared by the cyclos of the bicyclo ring system (e.g., tetramisole,</pre> |
|-----|---|------|---|
| 349 | Nitrogen attached directly to the six-membered hetero ring                                    | 369  | etc.)Chalcogen bonded directly to   |
| 350 | by nonionic bondingC=O bonded directly to the   |      | ring carbon of the thiazole   |
|     | six-membered hetero ring  | 370  | Nitrogen bonded directly to   |
| 351 | Nitrogen attached indirectly  |      | ring carbon of the thiazole   |
|     | to the six-membered hetero  | 0.74 | ring  |
| 250 | ring by nonionic bonding  | 371  | C=X bonded directly to the  |
| 352 | Nitrogen attached directly to the six-membered hetero ring                                    |      | nitrogen which is bonded directly to the thiazole ring  |
| 252 | by nonionic bonding   | 372  | (X is chalcogen)  |
| 353 | Plural acyclic nitrogens bonded directly to the same  | 3/4  | <pre>1,2-thiazoles (including<br/>hydrogenated)</pre>   |
|     | carbon or bonded directly to  | 373  | Polycyclo ring system having  |
| 354 | each otherC=O bonded directly to the  | 373  | the thiazole ring as one of the cyclos  |
| 224 | six-membered hetero ring  | 374  | 1,3-oxazoles (including   |
| 355 | At 3-position   |      | hydrogenated)   |
| 356 | C=0 in a C(=0)0 group (e.g.,  | 375  | Polycyclo ring system having  |
|     | nicotinic acid, etc.)   |      | the oxazole ring as one of the  |
| 357 | Nitrogen attached indirectly  |      | cyclos  |
|     | to the six-membered hetero  | 376  | Chalcogen bonded directly to  |
| 250 | ring by nonionic bonding  |      | ring carbon of the oxazole  |
| 358 | The ring nitrogen of the six-<br>membered hetero ring is                                      | 377  | ringNitrogen bonded directly to   |
|     | pentavalent (e.g., quaternary   | 311  | ring carbon of the oxazole  |
|     | pyridinium salt, etc.)  |      | ring  |
| 359 | Five-membered hetero ring   | 378  | 1,2-oxazoles (including   |
|     | containing at least one   |      | hydrogenated)   |
|     | nitrogen ring atom (e.g.,   | 379  | Polycyclo ring system having  |
| 360 | 1,2,3-triazoles, etc.)Plural ring chalcogens in the   |      | the oxazole ring as one of the cyclos   |
| 300 | hetero ring   | 380  | Chalcogen or nitrogen bonded  |
| 361 | Plural ring nitrogens and a   |      | directly to ring carbon of the  |
|     | single chalcogen in the hetero  |      | oxazole ring  |
|     | ring  | 381  | Tetrazoles (including   |
| 362 | $\dots$ 1,2,5-thiadiazoles (including   |      | hydrogenated)   |
| 262 | hydrogenated)   | 382  | Additional chalcogen  |
| 363 | 1,3,4-thiadiazoles (including   | 383  | containing hetero ring  |
| 364 | hydrogenated)Oxadiazoles (including   | 303  | <pre>1,2,4-triazoles (including hydrogenated)</pre>   |
| J04 | hydrogenated)   | 384  | Chalcogen bonded directly to  |
| 365 | 1,3-thiazoles (including  |      | the triazole ring   |
|     | hydrogenated)   | 385  | 1,3-diazoles  |
| 366 | Polycyclo ring system having  | 386  | Divalent chalcogen or acyclic   |
|     | the thiazole ring as one of the cyclos  |      | nitrogen double bonded directly to ring carbon of the   |
| 367 | Bicyclo ring system having  |      | diazole ring, or tautomeric   |
|     | the thiazole ring as one of   |      | equivalent  |
|     | the cyclos  | 387  | Polycyclo ring system having  |
|     |   |      | the diazole ring as one of the cyclos   |
|     |   |      | CYCIOS  |

| 388 | Nitrogen double bonded directly at 2-position of the diazole ring, or tautomeric                              | 409<br>410 | Spiro ring systemPolycyclo ring system having the five-membered hetero ring                               |
|-----|---|------------|---|
| 389 | equivalentDivalent chalcogen or acyclic nitrogen double bonded directly at both 2- and 4-                     | 411        | as one of the cyclosTricyclo ring system having the five-membered hetero ring as one of the cyclos        |
|     | <pre>positions, or tautomeric equivalent (e.g., hydantoin, etc.)</pre>  | 412        | Bicyclo ring system having<br>the five-membered hetero ring<br>as one of the cyclos                       |
| 390 | <pre>Chalcogen or nitrogen bonded directly at 1-, 3-, or 5-position by nonionic bonding</pre>                 | 413        | Ring nitrogen is shared by the cyclos of the bicyclo ring system  |
| 391 | <pre>Benzene ring bonded   directly to the diazole ring   by nonionic bonding</pre>                           | 414        | <pre>Additional hetero ring which is not part of the bicyclo ring system</pre>                            |
| 392 | <pre>Divalent chalcogen or   acyclic nitrogen double bonded   at 2-position, or tautomeric   equivalent</pre> | 415        | The bicyclo ring system consists of the five-membered hetero ring and a benzene ring (e.g., indole, etc.) |
| 393 | <pre>Polycyclo ring system having   the diazole ring as one of the   cyclos</pre>                             | 416        | The ring nitrogen is bonded directly to nonshared ring carbons of the five-                               |
| 394 | <pre>Benzo fused at 4,5-positions   of the diazole ring</pre>   |            | <pre>membered hetero ring (e.g., isoindole, etc.)</pre>   |
| 395 | Chalcogen or nitrogen   | 417        | Plural chalcogens bonded  |
|     | bonded directly at 1-, 2- or 3-position of the diazole ring by nonionic bonding                               |            | directly to ring carbons of<br>the five-membered hetero ring<br>(e.g., phthalimide, etc.)                 |
| 396 | Imidazoles  | 418        | Chalcogen bonded directly   |
| 397 | Additional hetero ring  |            | to ring carbon of the five-   |
| 398 | Chalcogen or nitrogen bonded  |            | membered hetero ring  |
| 370 | directly to the imidazole ring by nonionic bonding  | 419        | C=X bonded directly or indirectly by an acyclic   |
| 399 | Chalcogen or nitrogen bonded indirectly to the imidazole ring by nonionic bonding                             |            | carbon or carbon chain to ring carbon of the five-membered hetero ring (e.g., tryptophan,                 |
| 400 | At imidazole ring carbon  |            | etc.) (X is chalcogen)  |
| 401 | 2-imidazolines  | 420        | Indomethacine per se or   |
| 402 | Additional hetero ring  |            | ester thereof   |
| 403 | 1,2-diazoles  | 421        | Chalcogen bonded directly   |
| 404 | Divalent chalcogen or acyclic<br>nitrogen double bonded<br>directly to ring carbon of the                     |            | to ring carbon of the five-<br>membered hetero ring (e.g.,<br>adrenochrome, etc.)                         |
|     | diazole ring, or tautomeric   | 422        | Additional hetero ring  |
|     | equivalent  | 423        | $\dots$ C=X bonded directly to the  |
| 405 | <pre>Polycyclo ring system having   the diazole ring as one of the   cyclos</pre>                             |            | five-membered hetero ring by nonionic bonding (X is chalcogen)  |
| 406 | Pyrazoles   | 424        | Chalcogen bonded directly to  |
| 407 | Chalcogen or nitrogen bonded directly to the pyrazole ring  |            | the five-membered hetero ring by nonionic bonding   |
|     | by nonionic bonding   | 425        | Plural chalcogens bonded  |
| 408 | The five-membered hetero ring consists of one nitrogen and four carbons                                       |            | directly to the five-membered hetero ring by nonionic bonding   |

| 426 | Nitrogen bonded directly to the five-membered hetero ring | 448 | <pre>C=0 bonded directly to the hetero ring (X is chalcogen)</pre> |
|-----|---|-----|--|
|     | by nonionic bonding                                       | 449 | Oxygen containing hetero ring                                      |
| 427 | Two double bonds between ring                             | 450 | The hetero ring has at least                                       |
|     | members of the five-membered                              | 130 | seven members  |
|     | hetero ring (e.g., pyrrole,                               | 451 | The hetero ring is six-  |
|     | etc.)   | 431 | 3  |
| 428 | Chalcogen bonded indirectly                               | 450 | membered   |
| 120 | to the five-membered hetero                               | 452 | Plural ring oxygens in the   |
|     | ring by acyclic nonionic                                  | 450 | hetero ring  |
|     | bonding   | 453 | Polycyclo ring system having                                       |
| 429 | Carbocyclic ring bonded                                   |     | the hetero ring as one of the                                      |
| 423 |   | 4-4 | cyclos   |
|     | directly to the five-membered                             | 454 | Tricyclo ring system having  |
| 430 | hetero ring   |     | the hetero ring as one of the                                      |
|     | Sulfur containing hetero ring                             |     | cyclos   |
| 431 | The hetero ring has at least                              | 455 | Chalcogen bonded directly  |
| 400 | seven members   |     | to ring carbon of the hetero                                       |
| 432 | The hetero ring is six-                                   |     | ring   |
|     | membered  | 456 | Bicyclo ring system having   |
| 433 | Plural hetero atoms in the                                |     | the hetero ring as one of the                                      |
|     | hetero ring   |     | cyclos (e.g., chromones, etc.)                                     |
| 434 | Polycyclo ring system having                              | 457 | Coumarins (including   |
|     | the hetero ring as one of the                             |     | hydrogenated)  |
|     | cyclos  | 458 | Tocopherols (e.g., vitamin   |
| 435 | Three or more hetero atoms                                |     | E, etc.)   |
|     | in the hetero ring  | 459 | Nitrogen containing  |
| 436 | Two ring sulfurs in the                                   | 460 | Chalcogen bonded directly to                                       |
|     | hetero ring   |     | ring carbon of the hetero ring                                     |
| 437 | Tricyclo ring system having                               | 461 | The hetero ring is five-   |
|     | the hetero ring as one of the                             |     | membered   |
|     | cyclos  | 462 | Spiro ring system  |
| 438 | The hetero ring is five-                                  | 463 | Plural ring oxygens in the   |
|     | membered  |     | hetero ring  |
| 439 | Plural hetero atoms in the                                | 464 | Bicyclo ring system having   |
|     | hetero ring   |     | the hetero ring as one of the                                      |
| 440 | Only two ring sulfurs in the                              |     | cyclos (e.g.,  |
|     | hetero ring   |     | methylenedioxyphenyl group,  |
| 441 | Chalcogen bonded directly                                 |     | etc.)  |
|     | to ring carbon of the hetero                              | 465 | The hetero ring is   |
|     | ring  |     | substituted  |
| 442 | Nitrogen bonded directly to                               | 466 | Nitrogen containing  |
|     | the hetero ring by nonionic                               | 467 | Only two ring oxygens in the                                       |
|     | bonding   |     | hetero ring which is not a   |
| 443 | Polycyclo ring system having                              |     | polycyclo ring system (e.g.,                                       |
|     | the hetero ring as one of the                             |     | dioxolane, etc.)   |
|     | cyclos  | 468 | Polycyclo ring system having                                       |
| 444 | Additional hetero ring                                    |     | the hetero ring as one of the                                      |
| 445 | Chalcogen bonded directly to                              |     | cyclos   |
|     | ring carbon of the hetero ring                            | 469 | Bicyclo ring system having   |
| 446 | Chalcogen bonded directly to                              |     | the hetero ring as one of the                                      |
|     | ring sulfur by nonionic                                   |     | cyclos   |
|     | bonding   | 470 | Chalcogen or nitrogen  |
| 447 | Nitrogen bonded directly to                               |     | bonded directly to the hetero                                      |
|     | the hetero ring   |     | ring   |
|     | -   | 471 | Nitrogen containing  |
|     |   |     | 5  |

| 472 | The nitrogen bonded directly to the hetero ring | 508        | <pre>X-C=N containing (e.g.,   imidoester, etc.) (X is</pre> |
|-----|---|------------|--|
| 473 | Chalcogen bonded directly to the hetero ring    | 509        | <pre>chalcogen)(0=)N(=0)-0-C containing (e.g.,</pre>         |
| 474 | Ascorbic acid or derivative                     |            | nitrate ester, etc.)   |
|     | (e.g., vitamin C, etc.)                         | 510        | Polycyclo ring system  |
| 475 | The hetero ring is three-<br>membered           | 511        | Two of the cyclos share at least three ring members          |
| 476 | .N-C(=X)X containing (X is                      |            | (i.e., bridged)  |
|     | chalcogen) DOAI                                 | 512        | X-C(=X)-X containing (e.g.,                                  |
| 477 |   | 312        | carbonic acid ester,   |
| 477 | N-C(=X)-X-N containing                          |            |  |
| 478 | N-C(=X)-X-C containing                          |            | thiocarbonic acid ester, etc.)                               |
| 479 | With an additional active                       |            | (X is chalcogen)   |
|     | ingredient                                      | 513        | C-C(=X)-X-C containing (X is                                 |
| 480 | Polycyclo ring system attached                  |            | chalcogen and at least one X                                 |
| 400 |   |            | is other than oxygen)  |
|     | by nonionic bonding                             | 514        |  |
| 481 | Naphthyl ring system                            | 514        | Carbon bonded to -NCX or -XCN                                |
| 482 | N-C(=X)-N, $N-C(=N)N$ , $N-N$ ,                 |            | (e.g., cyanate, thiocyanate or                               |
|     | nitrogen directly bonded to                     |            | isothiocyanate, etc.) (X is                                  |
|     | oxygen by nonionic bonding or                   |            | chalcogen)   |
|     |   | 515        | With an additional active                                    |
|     | cyano containing                                | 313        | ingredient   |
| 483 | Plural N-C(=X)-X groups                         | F16        |  |
| 484 | Ring in acid moiety                             | 516        | Containing plural -NCX or -XCN                               |
| 485 | The ring is a benzene ring                      |            | groups or a cyano  |
| 486 | Phenoxy in acid moiety                          | 517        | S-X-C containing (e.g.,                                      |
|     |   |            | sulfates, etc.) (X is  |
| 487 | The benzene ring is attached                    |            | chalcogen)   |
|     | to nitrogen through an acyclic                  | Г10        |  |
|     | carbon or carbon chain                          | 518        | S of S-X-C attached directly                                 |
| 488 | Ring in alcohol moiety                          |            | to a benzene ring  |
| 489 | Ring in alcohol moiety                          | 519        | Cyano or isocyano bonded                                     |
| 490 | _   |            | directly to carbon   |
| 490 | Ring attached directly to                       | 520        | Benzene ring containing                                      |
|     | oxygen of $N-C(=0)-0$                           | 521        | C=O other than as ketone or                                  |
| 491 | With an additional active                       | 221        |  |
|     | ingredient                                      | <b>500</b> | aldehyde   |
| 492 | .Heavy metal containing DOAI                    | 522        | The cyano is bonded directly                                 |
| 493 | Tin   |            | to a benzene ring  |
| 494 | Zinc  | 523        | Additional nitrogen other                                    |
|     | * * = = *                                       |            | than cyano   |
| 495 | Gold or silver                                  | 524        | The cyano is bonded directly                                 |
| 496 | Mercury   | J24        |  |
| 497 | Nitrogen containing                             |            | to a benzene ring  |
| 498 | Lead  | 525        | Two or more of the cyano                                     |
| 499 | Copper  |            | groups   |
|     |   | 526        | Acyclic  |
| 500 | With an additional active                       | 527        | C=O other than as ketone or                                  |
|     | ingredient                                      | 527        |  |
| 501 | Nickel or cobalt                                | <b>500</b> | aldehyde   |
| 502 | Iron  | 528        | C(=0)N containing  |
| 503 | Antimony or bismuth                             | 529        | Z-C(=0)-O-Y wherein Z is                                     |
|     |   |            | hydrogen or an organic radical                               |
| 504 | Arsenic   |            | bonded to the C(=0) by a                                     |
| 505 | Cadmium or chromium                             |            | carbon and Y is an organic                                   |
| 506 | .Ester DOAI                                     |            | radical bonded to the oxygen                                 |
| 507 | R-C(=X)-N-X-C containing (e.g.,                 |            |  |
|     | hydroxamic acid ester, etc.)                    | F 2 C      | by a carbon  |
|     | (R is C or H and X is                           | 530        | Z contains a cyclopentyl or                                  |
|     |   |            | cyclopentene ring  |
|     | chalcogen)                                      |            |  |

| 531   | Z contains a cyclopropyl or cyclopropene ring | 553            | <pre>.Radical -XH acid, or anhydride,<br/>acid halide or salt thereof (X</pre> |
|-------|---|----------------|--|
| 532   | $\ldots$ Z-C(=0)-O-Y, wherein Z               |                | is chalcogen) DOAI   |
|       | contains a benzene ring                       | 554            | Amine addition salt of the acid  |
| 533   | Compound contains two or more                 | 555            | Benzene ring in acid moiety  |
| 333   | C(=0)0 groups indirectly                      | 556            | Inner quaternary ammonium salt   |
|       |   | 330            |  |
|       | bonded together by only                       | <del>-</del> - | (e.g., betaine, etc.)  |
| F 2 4 | conalent bonds                                | 557            | Carboxylic acid, percarboxylic   |
| 534   | Z or Y radical contains a                     |                | acid, or salt thereof (e.g.,   |
|       | nitrogen atom                                 |                | peracetic acid, etc.)  |
| 535   | $\dots$ The nitrogen of the Z                 | 558            | Higher fatty acid or salt  |
|       | radical is directly bonded to                 |                | thereof  |
|       | a benzene ring which is                       | 559            | Ring containing  |
|       | directly bonded to the $C(=0)$                | 560            | Carbon to carbon unsaturation  |
|       | group   | 561            | Nitrogen other than as nitro   |
| 536   | With an agent to enhance                      |                | or nitroso nonionically bonded   |
|       | topical absorption or with a                  | 562            | Sulfur nonionically bonded   |
|       | stabilizing agent                             | 563            | RC(=0)N containing (i.e.,  |
| 537   | With an additional active                     |                | carboxamide) (R is C or H)   |
|       | ingredient                                    | 564            | Plural nitrogens nonionically  |
| 538   | Nitrogen bonded to carbon in                  | 301            | bonded   |
|       | Z moiety                                      | 565            |  |
| 539   | Plural separated benzene                      | 303            | N-N or N=C(-N)-N containing  |
|       | rings in Z moiety                             |                | (e.g., hydrazines, hydrazones,   |
| 540   | Nitrogen in Y moiety                          | F.C.C          | or quanidines, etc.)   |
| 541   | Aldehyde or ketone in Z or                    | 566            | Polycarboxylic acid  |
| 24T   | Y radical                                     | 567            | Benzene ring nonionically  |
| E40   |   |                | bonded   |
| 542   | Z radical contains two or                     | 568            | Benzene ring nonionically  |
|       | more nitrogen atoms at least                  |                | bonded   |
|       | one of which forms a C(=X)N                   | 569            | Polycyclo ring system  |
|       | group (X is chalcogen)                        | 570            | Carboxy or salt thereof only   |
| 543   | Z forms a phenoxy alkyl or                    |                | attached indirectly to the   |
|       | phenoxy alkenyl radical                       |                | benzene ring   |
| 544   | $\dots$ C(=0)0 attached directly              | 571            | Ether oxygen single bonded   |
|       | through the carbon to a                       |                | to carboxylic acid,  |
|       | benzene ring                                  |                | percarboxylic acid or salt   |
| 545   | Ketone in Z radical                           |                | thereof through an acyclic   |
| 546   | ZC(=0)OY, wherein Z is an                     |                | carbon or acyclic carbon chain   |
|       | acyclic radical bonded to the                 | 572            | Cyclic carboxylic acid   |
|       | C=O by a carbon and Y is an                   |                | containing three to five   |
|       | organic radical bonded to the                 |                | carbons or cyclic  |
|       | oxygen by a carbon                            |                | percarboxylic acid containing  |
| 547   | Compound contains two or more                 |                | three to five carbons or salt  |
|       | C(=0)0 groups                                 |                | thereof  |
| 548   | Ring is alcohol moiety                        | 573            | Cyclopentyl or cyclopentene  |
| 549   | Z radical contains carbon to                  | 373            | (e.g., prostaglandins, etc.)   |
| 315   | carbon unsaturation                           | 574            |  |
| 550   | Z radical contains sulfur or                  | 5/4            | Polycarboxylic acid or salt  |
| 330   |   |                | thereof  |
| EE1   | halogen                                       | 575            | Hydroxamic acid or salt thereof  |
| 551   | Z radical contains nitrogen                   | 576            | Benzene ring containing  |
| 552   | Z contains an unbroken chain                  | 577            | Polycyclo ring system  |
|       | of at least seven carbon atoms                | 578            | Acyclic acid or salt thereof   |
|       | bonded directly to the C(=0)                  |                |  |
|       | group   |                |  |

| 579        | .Nitrogen containing other than solely as a nitrogen in an inorganic ion of an addition salt, a nitro or a nitroso DOAI | 601 | Sulfonamides (i.e., Q-<br>(O=)S(=O)-N, wherein Q is a<br>substituent and wherein any<br>substituent attached to the<br>nitrogen will be referred to |
|------------|---|-----|---|
| 580        | Thioureas (i.e., N-C(=S)-N  |     | as E)   |
| 581        | Thiocarbazides or   | 602 | Q contains benzene ring   |
| 301        |   | 603 | _   |
|            | thiosemicarbazides (i.e., N-N-  |     | Nitrogen in Q   |
|            | C(=S)-N containing)   | 604 | Q is monocyclic   |
| 582        | Thiocarbazones or   | 605 | Q is acyclic and benzene ring   |
|            | thiosemicarbazones (i.e., C=N-  |     | in a substituent E  |
|            | N-C(=S)-N containing)   | 606 | N-S-S containing  |
| 583        | _   |     | 3   |
|            | Benzene ring containing   | 607 | N-S-N containing or contains a  |
| 584        | C=O, sulfur or cyano attached   |     | nitrogen bonded directly to a   |
|            | directly to thiourea nitrogen   |     | S=0 group (e.g., sulfinamides,  |
|            | by nonionic bonding   |     | etc.)   |
| 585        | Benzene ring containing   | 608 | Sulfur attached directly to   |
| 586        |   | 000 | amino nitrogen by nonionic  |
| 580        | Nitrogen attached indirectly  |     | J 1   |
|            | to the $-C(=S)$ -group by   |     | bonding (e.g., sulfenamides,  |
|            | nonionic bonding  |     | etc.)   |
| 587        | Oxygen containing   | 609 | Cyanamides (i.e., compounds   |
| 588        | Ureas (i.e., $N-C(=O)-N$ )  |     | containing cyano bonded   |
| 589        | Nitro or nitroso bonded   |     | directly to amino nitrogen)   |
| 307        |   | 610 | Nitramines (i.e., compounds   |
|            | directly to amino nitrogen  | 010 |   |
|            | (e.g., nitramine, nitrosamine,  |     | containing nitro bonded   |
|            | nitro-urea, etc.)   |     | directly to amino nitrogen)   |
| 590        | Carbazides or semicarbazides  | 611 | Nitrosamines (i.e., compounds   |
|            | (i.e., N-N-C(=0)-N containing)  |     | containing nitroso bonded   |
| 591        | Biurets (i.e., N-C(=0)-N-   |     | directly to amino nitrogen)   |
| J J I      | C(=0)-N)  | 612 | Haloamines (i.e., compounds   |
| <b>500</b> |   | 012 |   |
| 592        | Sulfur attached directly to   |     | containing halogen attached   |
|            | urea nitrogen by nonionic   |     | directly to amino nitrogen by   |
|            | bonding   |     | nonionic bonding)   |
| 593        | Sulfur is part of a   | 613 | Carboxamides (i.e., $R-C(=0)-N$ ,   |
|            | substituent which contains  |     | wherein R is a radical having   |
|            | additional nitrogen   |     | carbon bonded directly to the   |
| E O 4      | _   |     | C(=0)-N or is hydrogen and  |
| 594        | Additional C=O bonded directly  |     | wherein any substituent   |
|            | to urea nitrogen  |     | -   |
| 595        | Benzene ring containing   |     | attached to nitrogen will be  |
| 596        | Benzene ring bonded directly  |     | referred to as E)   |
|            | to urea nitrogen  | 614 | N-N containing (e.g.,   |
| 597        | Benzene ring is part of a   |     | aminimine, hydrazine, etc.)   |
| 371        |   | 615 | R contains benzene ring   |
|            | substituent which contains  | 616 | Plural carboxamide groups or  |
|            | nitrogen  | 010 | 3 1   |
| 598        | Benzene ring is part of a   |     | plural C=O groups bonded  |
|            | substituent which contains  |     | directly to the same nitrogen   |
|            | oxygen  | 617 | R contains benzene ring   |
| 599        | Thiocarboxamides, (i.e., C(=S)-   | 618 | Sulfur in R   |
| 333        |   | 619 | Nitrogen in R   |
| 600        | N)  | 620 | The nitrogen in R is an   |
| 600        | Sulfamides (i.e., $N-(O=)S(=O)-$  | 020 | amino nitrogen attached   |
|            | N)  |     | _   |
|            |   |     | indirectly to a ring by   |
|            |   |     | acyclic bonding   |
|            |   | 621 | C=O in R  |
|            |   | 622 | C-O- group in R   |
|            |   |     |   |

| 623 | Plural alicyclic rings in R                             | 650 | The aryl ring or aryl ring     |
|-----|---|-----|--------------------------------|
| 624 | $\dots$ Three-membered ring in R                        |     | system is bonded directly to   |
| 625 | R is acyclic  |     | another ring or ring system    |
| 626 | Nitrogen in R   | 651 | Ether oxygen is part of the    |
| 627 | Carbon to carbon unsaturation                           |     | chain                          |
|     | in R  | 652 | Alkanol group only between     |
| 628 | Halogen bonded directly to                              |     | the amino nitrogen and an      |
|     | carbon in R   |     | ether oxygen which is bonded   |
| 629 | R is hydrogen or a lower                                |     | directly to the aryl ring or   |
| 022 | saturated alkyl of less than                            |     | aryl ring system (i.e.,        |
|     | seven carbons   |     | aryloxy alkanol amines)        |
| 630 | A ring or polycyclo ring                                | 653 | Hydroxy, bonded directly to    |
| 030 | system in a substituent E is                            |     | carbon, attached directly or   |
|     | attached indirectly to the                              |     | indirectly to the acyclic      |
|     | <del>-</del>  |     | carbon or chain by acyclic     |
|     | carboxamide nitrogen or to an                           |     | nonionic bonding (e.g., beta   |
|     | amino nitrogen in substituent                           |     | hydroxy phenethylamines, etc.) |
| 621 | E by acyclic nonionic bonding                           | 654 | The chain consists of two or   |
| 631 | Amidines (i.e., N=C-N)                                  | 051 | more carbons which are         |
| 632 | Amidino hydrazines or                                   |     |                                |
|     | hydrazones (i.e., N-N=C-N or                            |     | unsubtituted or have acyclic   |
|     | N=C-N-N)  | 655 | hydrocarbyl substituents only  |
| 633 | Amidoximes (i.e., N-C=N-O)                              | 055 | The aryl ring or aryl ring     |
| 634 | Guanidines (i.e., $N=C(-N)-N$ )                         |     | system and amino nitrogen are  |
| 635 | Biguanides (i.e., N=C(-N)-                              |     | bonded directly to the same    |
|     | N(N-)C=N  |     | acylic carbon, which carbon    |
| 636 | Polyamidines  |     | additionally has only hydrogen |
| 637 | Benzene ring containing                                 |     | or acyclic hydrocarbyl         |
| 638 | Nitrogen double bonded directly                         |     | substituents bonded directly   |
|     | to carbon   |     | thereto                        |
| 639 | Hydrazones (i.e., C=N-N)                                | 656 | Polycyclo ring system          |
| 640 | Oximes (i.e., C=N-O-)                                   | 657 | Bicyclo ring system            |
| 641 | Aldimines or ketimines which                            | 658 | Two benzene rings bonded       |
| OAI |   |     | directly to the same nitrogen  |
|     | contain a benzene ring (i.e., RC=N wherein R is C or H) | 659 | Alicyclic ring or ring system  |
| C10 | •   |     | and amino nitrogen are         |
| 642 | Quaternary ammonium containing                          |     | attached indirectly by an      |
| 643 | Benzene ring containing                                 |     | acyclic carbon or acyclic      |
| 644 | Amine oxides  |     | chain                          |
| 645 | Nitroxides, oxyamines or                                | 660 | Plural alicyclic rings         |
|     | hydroxylamines (i.e., N-O or                            | 661 | Polycyclo ring system          |
|     | N-OH)   | 662 | Tricyclo ring system           |
| 646 | Benzene ring containing                                 | 663 | Acyclic                        |
| 647 | Amino nitrogen and a ring                               | 664 | N-N containing (e.g.,          |
|     | bonded directly to the same                             | 001 | aminimine, hydrazine, etc.)    |
|     | ring and any other amino                                | 665 | Sulfur containing              |
|     | nitrogen in the compound is                             |     |                                |
|     | bonded directly to one of the                           | 666 | Aldehyde or ketone containing  |
|     | rings   | 667 | C-O-group containing           |
| 648 | Two aryl rings or aryl ring                             | 668 | Polyether                      |
|     | systems bonded directly to the                          | 669 | Polyhydroxy                    |
|     | same acyclic carbon                                     | 670 | Monoether                      |
| 649 | Amino nitrogen attached to                              | 671 | Carbon to carbon unsaturation  |
|     | aryl ring or aryl ring system                           | 672 | Halogen bonded directly to     |
|     | by an acyclic carbon or                                 |     | carbon                         |
|     | acyclic chain   | 673 | Plural amino nitrogens         |
|     |   | 674 | Three or more amino nitrogens  |
|     |   |     | _                              |

| 675 | .Ketone DOAI                    | 710 | Acyclic carbon to carbon       |
|-----|---------------------------------|-----|--------------------------------|
| 676 | Nitrogen containing             |     | unsaturation                   |
| 677 | Bicyclo ring system having a    | 711 | Acyclic                        |
|     | benzene ring as one of the      | 712 | Thioether                      |
|     | cyclos                          | 713 | Acyclic carbon to carbon       |
| 678 | Benzene ring containing         |     | unsaturation                   |
| 679 | Plural rings                    | 714 | .Peroxide DOAI                 |
| 680 | Polycyclo ring system           | 715 | .Ether DOAI                    |
| 681 | Bicyclo                         | 716 | Nitrogen containing            |
| 682 | Naphthyl ring system            | 717 | Benzene ring containing        |
| 683 | Alicyclic ring                  | 718 | Plural oxygens                 |
| 684 | Five-membered alicyclic ring    | 719 | Alicyclic ring                 |
| 685 | C=O bonded directly to          | 720 | Acyclic carbon to carbon       |
|     | benzene ring                    |     | unsaturation                   |
| 686 | Two benzene rings bonded        | 721 | Plural benzene rings           |
|     | directly to the same C=O        | 722 | Acyclic                        |
| 687 | Oxygen single bonded to         | 723 | Plural oxygens                 |
|     | carbon                          | 724 | .C-O-group (e.g., alcohol,     |
| 688 | C=O bonded directly to benzene  |     | alcoholate, etc.) DOAI         |
|     | ring (e.g., acetophenone,       | 725 | Vitamin A compound or          |
|     | etc.)                           |     | derivative                     |
| 689 | Oxygen single bonded to         | 726 | Diphenyl-substituted acyclic   |
|     | carbon                          |     | alcohol or alcoholate          |
| 690 | Alicyclic ring containing       | 727 | Nitrogen containing            |
| 691 | Plural alicyclic rings          | 728 | C of C-O- group is nuclear C   |
| 692 | Camphor or nuclear              |     | of a benzene ring (e.g.,       |
|     | substituted derivatives         |     | phenol, phenolate, etc.)       |
|     | thereof                         | 729 | Alicyclic ring containing      |
| 693 | .Aldehyde DOAI                  | 730 | Benzene ring containing        |
| 694 | Formaldehyde                    | 731 | C of C-O- group is nuclear C   |
| 695 | With polycyclo compound         |     | of a benzene ring (e.g.,       |
| 696 | With alcohol                    |     | phenol, phenolate, etc.)       |
| 697 | With nitrogen containing        | 732 | Polycyclo ring system (e.g.,   |
|     | compound                        |     | naphthols, etc.)               |
| 698 | With preservative or stabilizer | 733 | Acyclic carbon to carbon       |
| 699 | Benzene ring containing         |     | unsaturation                   |
| 700 | Polycyclo ring system           | 734 | Two or more separate aryl-0-   |
| 701 | Acyclic carbon to carbon        |     | groups                         |
|     | unsaturation                    | 735 | Nuclear halogenated            |
| 702 | Sulfur containing               | 736 | Additional benzene ring        |
| 703 | Carbon to carbon unsaturation   |     | containing                     |
| 704 | Nitrogen containing             | 737 | Nuclear halogenated            |
| 705 | Plural C=O groups               | 738 | Polyhydroxy                    |
| 706 | .Sulfur, selenium or tellurium  | 739 | Carbon to carbon unsaturated   |
|     | compound (e.g., thioalcohols,   | 740 | .Nitrogen containing compound  |
|     | mercaptans, etc.)               |     | DOAI                           |
| 707 | Persulfide (e.g., R-S-S-R,      | 741 | Benzene ring containing        |
|     | etc.)                           | 742 | Polynitro                      |
| 708 | Oxygen bonded directly to       | 743 | .Halogenated hydrocarbon DOAI  |
|     | sulfur (e.g., sulfoxides,       | 744 | Unsaturated aliphatic compound |
|     | etc.)                           | 745 | Alkyne                         |
| 709 | Plural oxygens bonded directly  | 746 | Plural halogenated hydrocarbon |
|     | to the same sulfur (e.g.,       |     | compounds                      |
|     | sulfones, etc.)                 | 747 | Carbocyclic                    |
|     |                                 |     |                                |

| 748   | Two benzene rings directly   | 777  | .Carbohydrate or lignin, or  |
|---|--|--|--|
|   | attached to an acyclic   |  | derivative   |
|   | hydrocarbon or acyclic   | 778  | Starch or derivative   |
|   | halogenated hydrocarbon (e.g.,   | 779  | Algin or derivative  |
|   | D.D.T., etc.)  | 780  | Locust bean qum  |
| 749   | Fluorine containing  | 781  | Cellulose or derivative  |
| 750   | With organic ether or -OH  | 782  | .Natural gum or resin  |
|   | containing compound non-DOAI   | 783  | .Plant extract or plant material   |
| 751   | Benzene ring containing  | 703  | of undetermined constitution   |
| 752   | Alkyne   | 784  | .Carboxylic acid or salt thereof   |
| 753   | Polycyclo ring system  |  | 1  |
| 754   | Plural benzene rings   | 785  | .Carboxylic acid ester   |
| 75 <del>1</del><br>755  | _  | 786  | Glyceride  |
|   | Polycyclo ring system  | 787  | Beeswax  |
| 756   | Bicyclo  | 788  | .Nitrogen containing   |
| 757   | Two or more halogenated  | 788.1  | SOLID SYNTHETIC ORGANIC POLYMER  |
|   | hydrocarbons   |  | DERIVED SOLELY FROM  |
| 758   | Chlorine as only halogen   |  | HYDROCARBON REACTANTS AS   |
| 759   | Fluorine as only halogen   |  | DESIGNATED ORGANIC NONACTIVE   |
| 760   | Bromine and chlorine as only   |  | INGREDIENT CONTAINING  |
|   | halogens   | 789  | MISCELLANEOUS (E.G.,   |
| 761   | Bromine and fluorine as only   |  | HYDROCARBONS, ETC.)  |
|   | halogens   |  |  |
| 762   | .Hydrocarbon DOAI  |  |  |
| 763   | Carbocyclic  |  |  |
| 764   | Benzene ring containing  | CROSS-F  | REFERENCE ART COLLECTIONS  |
| 765   | Polycyclo ring system  |  |  |
| 766   | Polycyclo ring system  | 800  | LHRH LIKE  |
| 767   | With phosphorus containing non-  | 801  |  |
|   |  | 001  | COLLAGEN, GELATIN OR DERIVATIVES   |
|   | DOA I  |  | MILEDEOE   |
| 768   | DOAI With sulfur containing non-DOAI   | 902  | THEREOF  |
| 768<br>769  | With sulfur containing non-DOAI  | 802  | FIBRINOPEPTIDES, BLOOD-  |
| 768<br>769  | With sulfur containing non-DOAI DESIGNATED INORGANIC NONACTIVE   | 802  | FIBRINOPEPTIDES, BLOOD-<br>COAGULATION FACTORS OR  |
|   | With sulfur containing non-DOAI DESIGNATED INORGANIC NONACTIVE INGREDIENT OR ELEMENTAL   |  | FIBRINOPEPTIDES, BLOOD-<br>COAGULATION FACTORS OR<br>DERIVATIVES   |
| 769   | With sulfur containing non-DOAI DESIGNATED INORGANIC NONACTIVE INGREDIENT OR ELEMENTAL MATERIAL OTHER THAN WATER   | 803  | FIBRINOPEPTIDES, BLOOD- COAGULATION FACTORS OR DERIVATIVES KININ OR DERIVATIVES  |
|   | With sulfur containing non-DOAI DESIGNATED INORGANIC NONACTIVE INGREDIENT OR ELEMENTAL MATERIAL OTHER THAN WATER .Siliceous or calcareous material   | 803<br>804   | FIBRINOPEPTIDES, BLOOD- COAGULATION FACTORS OR DERIVATIVES KININ OR DERIVATIVES PHECMYCIN SERIES OR DERIVATIVES  |
| 769   | With sulfur containing non-DOAI  DESIGNATED INORGANIC NONACTIVE  INGREDIENT OR ELEMENTAL  MATERIAL OTHER THAN WATER  .Siliceous or calcareous material  (e.g., clay, earth, etc.)  | 803  | FIBRINOPEPTIDES, BLOOD- COAGULATION FACTORS OR DERIVATIVES KININ OR DERIVATIVES PHECMYCIN SERIES OR DERIVATIVES ADRENOCORTICOTROPIC HORMONE OR   |
| 769<br>770<br>771   | With sulfur containing non-DOAI  DESIGNATED INORGANIC NONACTIVE  INGREDIENT OR ELEMENTAL  MATERIAL OTHER THAN WATER  .Siliceous or calcareous material  (e.g., clay, earth, etc.)  .Oxygen gas containing  | 803<br>804<br>805  | FIBRINOPEPTIDES, BLOOD- COAGULATION FACTORS OR DERIVATIVES KININ OR DERIVATIVES PHECMYCIN SERIES OR DERIVATIVES ADRENOCORTICOTROPIC HORMONE OR DERIVATIVES   |
| 769   | With sulfur containing non-DOAI  DESIGNATED INORGANIC NONACTIVE  INGREDIENT OR ELEMENTAL  MATERIAL OTHER THAN WATER  .Siliceous or calcareous material  (e.g., clay, earth, etc.)  .0xygen gas containing  DESIGNATED ORGANIC NONACTIVE  | 803<br>804<br>805  | FIBRINOPEPTIDES, BLOOD- COAGULATION FACTORS OR DERIVATIVES KININ OR DERIVATIVES PHECMYCIN SERIES OR DERIVATIVES ADRENOCORTICOTROPIC HORMONE OR DERIVATIVES SOMATOSTATIN OR DERIVATIVES   |
| 769<br>770<br>771   | With sulfur containing non-DOAI  DESIGNATED INORGANIC NONACTIVE  INGREDIENT OR ELEMENTAL  MATERIAL OTHER THAN WATER  .Siliceous or calcareous material  (e.g., clay, earth, etc.)  .Oxygen gas containing  DESIGNATED ORGANIC NONACTIVE  INGREDIENT CONTAINING OTHER   | 803<br>804<br>805  | FIBRINOPEPTIDES, BLOOD- COAGULATION FACTORS OR DERIVATIVES KININ OR DERIVATIVES PHECMYCIN SERIES OR DERIVATIVES ADRENOCORTICOTROPIC HORMONE OR DERIVATIVES SOMATOSTATIN OR DERIVATIVES OXYTOXIN, VASOPRESSIN OR  |
| 769<br>770<br>771<br>772  | With sulfur containing non-DOAI  DESIGNATED INORGANIC NONACTIVE  INGREDIENT OR ELEMENTAL  MATERIAL OTHER THAN WATER  .Siliceous or calcareous material  (e.g., clay, earth, etc.)  .Oxygen gas containing  DESIGNATED ORGANIC NONACTIVE  INGREDIENT CONTAINING OTHER  THAN HYDROCARBON   | 803<br>804<br>805<br>806<br>807  | FIBRINOPEPTIDES, BLOOD- COAGULATION FACTORS OR DERIVATIVES KININ OR DERIVATIVES PHECMYCIN SERIES OR DERIVATIVES ADRENOCORTICOTROPIC HORMONE OR DERIVATIVES SOMATOSTATIN OR DERIVATIVES OXYTOXIN, VASOPRESSIN OR DERIVATIVES  |
| 769<br>770<br>771   | DESIGNATED INORGANIC NONACTIVE INGREDIENT OR ELEMENTAL MATERIAL OTHER THAN WATER Siliceous or calcareous material (e.g., clay, earth, etc.) Oxygen gas containing DESIGNATED ORGANIC NONACTIVE INGREDIENT CONTAINING OTHER THAN HYDROCARBON Aftertreated solid synthetic   | 803<br>804<br>805<br>806<br>807  | FIBRINOPEPTIDES, BLOOD- COAGULATION FACTORS OR DERIVATIVES KININ OR DERIVATIVES PHECMYCIN SERIES OR DERIVATIVES ADRENOCORTICOTROPIC HORMONE OR DERIVATIVES SOMATOSTATIN OR DERIVATIVES OXYTOXIN, VASOPRESSIN OR DERIVATIVES CALCITONIN OR DERIVATIVES  |
| 769<br>770<br>771<br>772  | DESIGNATED INORGANIC NONACTIVE INGREDIENT OR ELEMENTAL MATERIAL OTHER THAN WATER Siliceous or calcareous material (e.g., clay, earth, etc.) Oxygen gas containing DESIGNATED ORGANIC NONACTIVE INGREDIENT CONTAINING OTHER THAN HYDROCARBON Aftertreated solid synthetic organic polymer (e.g.,  | 803<br>804<br>805<br>806<br>807  | FIBRINOPEPTIDES, BLOOD- COAGULATION FACTORS OR DERIVATIVES KININ OR DERIVATIVES PHECMYCIN SERIES OR DERIVATIVES ADRENOCORTICOTROPIC HORMONE OR DERIVATIVES SOMATOSTATIN OR DERIVATIVES OXYTOXIN, VASOPRESSIN OR DERIVATIVES  |
| 769<br>770<br>771<br>772<br>772.1   | DESIGNATED INORGANIC NONACTIVE INGREDIENT OR ELEMENTAL MATERIAL OTHER THAN WATER Siliceous or calcareous material (e.g., clay, earth, etc.) Oxygen gas containing DESIGNATED ORGANIC NONACTIVE INGREDIENT CONTAINING OTHER THAN HYDROCARBON Aftertreated solid synthetic organic polymer (e.g., grafting, blocking, etc.)  | 803<br>804<br>805<br>806<br>807<br>808<br>809  | FIBRINOPEPTIDES, BLOOD- COAGULATION FACTORS OR DERIVATIVES KININ OR DERIVATIVES PHECMYCIN SERIES OR DERIVATIVES ADRENOCORTICOTROPIC HORMONE OR DERIVATIVES SOMATOSTATIN OR DERIVATIVES OXYTOXIN, VASOPRESSIN OR DERIVATIVES CALCITONIN OR DERIVATIVES  |
| 769 770 771 772 772.1 772.2   | DESIGNATED INORGANIC NONACTIVE INGREDIENT OR ELEMENTAL MATERIAL OTHER THAN WATER Siliceous or calcareous material (e.g., clay, earth, etc.) Oxygen gas containing DESIGNATED ORGANIC NONACTIVE INGREDIENT CONTAINING OTHER THAN HYDROCARBON Aftertreated solid synthetic organic polymer (e.g., grafting, blocking, etc.)Polyvinyl alcohol   | 803<br>804<br>805<br>806<br>807  | FIBRINOPEPTIDES, BLOOD- COAGULATION FACTORS OR DERIVATIVES KININ OR DERIVATIVES PHECMYCIN SERIES OR DERIVATIVES ADRENOCORTICOTROPIC HORMONE OR DERIVATIVES SOMATOSTATIN OR DERIVATIVES OXYTOXIN, VASOPRESSIN OR DERIVATIVES CALCITONIN OR DERIVATIVES ENKEPHALIN OR ENDORPHIN OR   |
| 769 770 771 772 772.1 772.2 772.3   | DESIGNATED INORGANIC NONACTIVE INGREDIENT OR ELEMENTAL MATERIAL OTHER THAN WATER Siliceous or calcareous material (e.g., clay, earth, etc.) Oxygen gas containing DESIGNATED ORGANIC NONACTIVE INGREDIENT CONTAINING OTHER THAN HYDROCARBON Aftertreated solid synthetic organic polymer (e.g., grafting, blocking, etc.)Polyvinyl alcohol .Solid synthetic organic polymer  | 803<br>804<br>805<br>806<br>807<br>808<br>809  | FIBRINOPEPTIDES, BLOOD- COAGULATION FACTORS OR DERIVATIVES KININ OR DERIVATIVES PHECMYCIN SERIES OR DERIVATIVES ADRENOCORTICOTROPIC HORMONE OR DERIVATIVES SOMATOSTATIN OR DERIVATIVES OXYTOXIN, VASOPRESSIN OR DERIVATIVES CALCITONIN OR DERIVATIVES ENKEPHALIN OR ENDORPHIN OR DERIVATIVES   |
| 769 770 771 772 772.1 772.2   | DESIGNATED INORGANIC NONACTIVE INGREDIENT OR ELEMENTAL MATERIAL OTHER THAN WATER .Siliceous or calcareous material (e.g., clay, earth, etc.) .Oxygen gas containing DESIGNATED ORGANIC NONACTIVE INGREDIENT CONTAINING OTHER THAN HYDROCARBON .Aftertreated solid synthetic organic polymer (e.g., grafting, blocking, etc.)Polyvinyl alcohol .Solid synthetic organic polymerPolymer from ethylenic monomers  | 803<br>804<br>805<br>806<br>807<br>808<br>809  | FIBRINOPEPTIDES, BLOOD- COAGULATION FACTORS OR DERIVATIVES KININ OR DERIVATIVES PHECMYCIN SERIES OR DERIVATIVES ADRENOCORTICOTROPIC HORMONE OR DERIVATIVES SOMATOSTATIN OR DERIVATIVES OXYTOXIN, VASOPRESSIN OR DERIVATIVES CALCITONIN OR DERIVATIVES ENKEPHALIN OR ENDORPHIN OR DERIVATIVES ADDICTION   |
| 769 770 771 772 772.1 772.2 772.3 772.4   | DESIGNATED INORGANIC NONACTIVE INGREDIENT OR ELEMENTAL MATERIAL OTHER THAN WATER .Siliceous or calcareous material (e.g., clay, earth, etc.) .Oxygen gas containing DESIGNATED ORGANIC NONACTIVE INGREDIENT CONTAINING OTHER THAN HYDROCARBON .Aftertreated solid synthetic organic polymer (e.g., grafting, blocking, etc.)Polyvinyl alcohol .Solid synthetic organic polymerPolymer from ethylenic monomers only   | 803<br>804<br>805<br>806<br>807<br>808<br>809<br>810<br>811  | FIBRINOPEPTIDES, BLOOD- COAGULATION FACTORS OR DERIVATIVES KININ OR DERIVATIVES PHECMYCIN SERIES OR DERIVATIVES ADRENOCORTICOTROPIC HORMONE OR DERIVATIVES SOMATOSTATIN OR DERIVATIVES OXYTOXIN, VASOPRESSIN OR DERIVATIVES CALCITONIN OR DERIVATIVES ENKEPHALIN OR ENDORPHIN OR DERIVATIVES ADDICTION .Alcohol  |
| 769  770  771  772  772.1  772.2  772.3  772.4  772.5                           | DESIGNATED INORGANIC NONACTIVE INGREDIENT OR ELEMENTAL MATERIAL OTHER THAN WATER  Siliceous or calcareous material (e.g., clay, earth, etc.)  Oxygen gas containing DESIGNATED ORGANIC NONACTIVE INGREDIENT CONTAINING OTHER THAN HYDROCARBON  Aftertreated solid synthetic organic polymer (e.g., grafting, blocking, etc.) Polyvinyl alcohol .Solid synthetic organic polymerPolymer from ethylenic monomers onlyHeterocyclic monomer  | 803<br>804<br>805<br>806<br>807<br>808<br>809<br>810<br>811<br>812   | FIBRINOPEPTIDES, BLOOD- COAGULATION FACTORS OR DERIVATIVES KININ OR DERIVATIVES PHECMYCIN SERIES OR DERIVATIVES ADRENOCORTICOTROPIC HORMONE OR DERIVATIVES SOMATOSTATIN OR DERIVATIVES OXYTOXIN, VASOPRESSIN OR DERIVATIVES CALCITONIN OR DERIVATIVES ENKEPHALIN OR ENDORPHIN OR DERIVATIVES ADDICTION .Alcohol .Narcotic  |
| 769 770 771 772 772.1 772.2 772.3 772.4   | DESIGNATED INORGANIC NONACTIVE INGREDIENT OR ELEMENTAL MATERIAL OTHER THAN WATER Siliceous or calcareous material (e.g., clay, earth, etc.) Oxygen gas containing DESIGNATED ORGANIC NONACTIVE INGREDIENT CONTAINING OTHER THAN HYDROCARBON Aftertreated solid synthetic organic polymer (e.g., grafting, blocking, etc.) .Polyvinyl alcohol .Solid synthetic organic polymerPolymer from ethylenic monomers onlyHeterocyclic monomerCarboxylic acid containing  | 803<br>804<br>805<br>806<br>807<br>808<br>809<br>810<br>811<br>812<br>813  | FIBRINOPEPTIDES, BLOOD- COAGULATION FACTORS OR DERIVATIVES KININ OR DERIVATIVES PHECMYCIN SERIES OR DERIVATIVES ADRENOCORTICOTROPIC HORMONE OR DERIVATIVES SOMATOSTATIN OR DERIVATIVES OXYTOXIN, VASOPRESSIN OR DERIVATIVES CALCITONIN OR DERIVATIVES ENKEPHALIN OR ENDORPHIN OR DERIVATIVES ADDICTION .Alcohol .Narcotic .Tobacco   |
| 769  770  771  772.1  772.2  772.3  772.4  772.5  772.6                         | DESIGNATED INORGANIC NONACTIVE INGREDIENT OR ELEMENTAL MATERIAL OTHER THAN WATER Siliceous or calcareous material (e.g., clay, earth, etc.) Oxygen gas containing DESIGNATED ORGANIC NONACTIVE INGREDIENT CONTAINING OTHER THAN HYDROCARBON Aftertreated solid synthetic organic polymer (e.g., grafting, blocking, etc.)Polyvinyl alcohol .Solid synthetic organic polymerPolymer from ethylenic monomers onlyHeterocyclic monomerCarboxylic acid containing monomer  | 803<br>804<br>805<br>806<br>807<br>808<br>809<br>810<br>811<br>812<br>813<br>814   | FIBRINOPEPTIDES, BLOOD- COAGULATION FACTORS OR DERIVATIVES KININ OR DERIVATIVES PHECMYCIN SERIES OR DERIVATIVES ADRENOCORTICOTROPIC HORMONE OR DERIVATIVES SOMATOSTATIN OR DERIVATIVES OXYTOXIN, VASOPRESSIN OR DERIVATIVES CALCITONIN OR DERIVATIVES ENKEPHALIN OR ENDORPHIN OR DERIVATIVES ADDICTION .Alcohol .Narcotic .Tobacco ANEMIA .Sickle cell   |
| 769  770  771  772.1  772.2  772.3  772.4  772.5  772.6  772.7                  | DESIGNATED INORGANIC NONACTIVE INGREDIENT OR ELEMENTAL MATERIAL OTHER THAN WATER Siliceous or calcareous material (e.g., clay, earth, etc.) Oxygen gas containing DESIGNATED ORGANIC NONACTIVE INGREDIENT CONTAINING OTHER THAN HYDROCARBON Aftertreated solid synthetic organic polymer (e.g., grafting, blocking, etc.)Polyvinyl alcohol .Solid synthetic organic polymerPolymer from ethylenic monomers onlyHeterocyclic monomerCarboxylic acid containing monomerHeterocyclic monomer  | 803<br>804<br>805<br>806<br>807<br>808<br>809<br>810<br>811<br>812<br>813<br>814<br>815                                    | FIBRINOPEPTIDES, BLOOD- COAGULATION FACTORS OR DERIVATIVES KININ OR DERIVATIVES PHECMYCIN SERIES OR DERIVATIVES ADRENOCORTICOTROPIC HORMONE OR DERIVATIVES SOMATOSTATIN OR DERIVATIVES OXYTOXIN, VASOPRESSIN OR DERIVATIVES CALCITONIN OR DERIVATIVES ENKEPHALIN OR ENDORPHIN OR DERIVATIVES ADDICTION .Alcohol .Narcotic .Tobacco ANEMIA  |
| 769  770  771  772.1  772.2  772.3  772.4  772.5  772.6                         | DESIGNATED INORGANIC NONACTIVE INGREDIENT OR ELEMENTAL MATERIAL OTHER THAN WATER Siliceous or calcareous material (e.g., clay, earth, etc.) Oxygen gas containing DESIGNATED ORGANIC NONACTIVE INGREDIENT CONTAINING OTHER THAN HYDROCARBON Aftertreated solid synthetic organic polymer (e.g., grafting, blocking, etc.)Polyvinyl alcohol .Solid synthetic organic polymerPolymer from ethylenic monomers onlyHeterocyclic monomerCarboxylic acid containing monomer  | 803<br>804<br>805<br>806<br>807<br>808<br>809<br>810<br>811<br>812<br>813<br>814<br>815<br>816                             | FIBRINOPEPTIDES, BLOOD- COAGULATION FACTORS OR DERIVATIVES KININ OR DERIVATIVES PHECMYCIN SERIES OR DERIVATIVES ADRENOCORTICOTROPIC HORMONE OR DERIVATIVES SOMATOSTATIN OR DERIVATIVES OXYTOXIN, VASOPRESSIN OR DERIVATIVES CALCITONIN OR DERIVATIVES ENKEPHALIN OR ENDORPHIN OR DERIVATIVES ADDICTION .Alcohol .Narcotic .Tobacco ANEMIA .Sickle cell ANESTHETIC, GENERAL ANESTHETIC, TOPICAL   |
| 769  770  771  772.1  772.2  772.3  772.4  772.5  772.6  772.7                  | DESIGNATED INORGANIC NONACTIVE INGREDIENT OR ELEMENTAL MATERIAL OTHER THAN WATER Siliceous or calcareous material (e.g., clay, earth, etc.) Oxygen gas containing DESIGNATED ORGANIC NONACTIVE INGREDIENT CONTAINING OTHER THAN HYDROCARBON Aftertreated solid synthetic organic polymer (e.g., grafting, blocking, etc.)Polyvinyl alcohol .Solid synthetic organic polymerPolymer from ethylenic monomers onlyHeterocyclic monomerCarboxylic acid containing monomerHeterocyclic monomer  | 803<br>804<br>805<br>806<br>807<br>808<br>809<br>810<br>811<br>812<br>813<br>814<br>815<br>816<br>817<br>818               | FIBRINOPEPTIDES, BLOOD- COAGULATION FACTORS OR DERIVATIVES KININ OR DERIVATIVES PHECMYCIN SERIES OR DERIVATIVES ADRENOCORTICOTROPIC HORMONE OR DERIVATIVES SOMATOSTATIN OR DERIVATIVES OXYTOXIN, VASOPRESSIN OR DERIVATIVES CALCITONIN OR DERIVATIVES ENKEPHALIN OR ENDORPHIN OR DERIVATIVES ADDICTION .Alcohol .Narcotic .Tobacco ANEMIA .Sickle cell ANESTHETIC, GENERAL ANESTHETIC, TOPICAL ANESTHETIC, LOCAL                                   |
| 769  770  771  772.1  772.1  772.2  772.3  772.4  772.5  772.6  772.7  773      | DESIGNATED INORGANIC NONACTIVE INGREDIENT OR ELEMENTAL MATERIAL OTHER THAN WATER Siliceous or calcareous material (e.g., clay, earth, etc.) Oxygen gas containing DESIGNATED ORGANIC NONACTIVE INGREDIENT CONTAINING OTHER THAN HYDROCARBON Aftertreated solid synthetic organic polymer (e.g., grafting, blocking, etc.)Polyvinyl alcohol .Solid synthetic organic polymerPolymer from ethylenic monomers onlyHeterocyclic monomerCarboxylic acid containing monomerHeterocyclic monomerPeptide containing  | 803<br>804<br>805<br>806<br>807<br>808<br>809<br>810<br>811<br>812<br>813<br>814<br>815<br>816<br>817<br>818               | FIBRINOPEPTIDES, BLOOD- COAGULATION FACTORS OR DERIVATIVES KININ OR DERIVATIVES PHECMYCIN SERIES OR DERIVATIVES ADRENOCORTICOTROPIC HORMONE OR DERIVATIVES SOMATOSTATIN OR DERIVATIVES OXYTOXIN, VASOPRESSIN OR DERIVATIVES CALCITONIN OR DERIVATIVES ENKEPHALIN OR ENDORPHIN OR DERIVATIVES ADDICTION .Alcohol .Narcotic .Tobacco ANEMIA .Sickle cell ANESTHETIC, GENERAL ANESTHETIC, TOPICAL ANTACID, ORAL                                       |
| 769  770  771  772.1  772.1  772.2  772.3  772.4  772.5  772.6  772.7  773  774 | DESIGNATED INORGANIC NONACTIVE INGREDIENT OR ELEMENTAL MATERIAL OTHER THAN WATER Siliceous or calcareous material (e.g., clay, earth, etc.) Oxygen gas containing DESIGNATED ORGANIC NONACTIVE INGREDIENT CONTAINING OTHER THAN HYDROCARBON Aftertreated solid synthetic organic polymer (e.g., grafting, blocking, etc.)Polyvinyl alcohol Solid synthetic organic polymerPolymer from ethylenic monomers onlyHeterocyclic monomerCarboxylic acid containing monomerHeterocyclic monomer .Peptide containingGelatin or derivative                        | 803<br>804<br>805<br>806<br>807<br>808<br>809<br>810<br>811<br>812<br>813<br>814<br>815<br>816<br>817<br>818<br>819<br>820 | FIBRINOPEPTIDES, BLOOD- COAGULATION FACTORS OR DERIVATIVES KININ OR DERIVATIVES PHECMYCIN SERIES OR DERIVATIVES ADRENOCORTICOTROPIC HORMONE OR DERIVATIVES SOMATOSTATIN OR DERIVATIVES OXYTOXIN, VASOPRESSIN OR DERIVATIVES CALCITONIN OR DERIVATIVES ENKEPHALIN OR ENDORPHIN OR DERIVATIVES ADDICTION .Alcohol .Narcotic .Tobacco ANEMIA .Sickle cell ANESTHETIC, GENERAL ANESTHETIC, TOPICAL ANESTHETIC, LOCAL ANTACID, ORAL .With antiflatulent |
| 769  770  771  772.1  772.1  772.2  772.3  772.4  772.5  772.6  772.7  773  774 | DESIGNATED INORGANIC NONACTIVE INGREDIENT OR ELEMENTAL MATERIAL OTHER THAN WATER Siliceous or calcareous material (e.g., clay, earth, etc.) Oxygen gas containing DESIGNATED ORGANIC NONACTIVE INGREDIENT CONTAINING OTHER THAN HYDROCARBON Aftertreated solid synthetic organic polymer (e.g., grafting, blocking, etc.)Polyvinyl alcohol .Solid synthetic organic polymerPolymer from ethylenic monomers onlyHeterocyclic monomerCarboxylic acid containing monomerHeterocyclic monomerPeptide containingGelatin or derivativeCasein (milk protein) or | 803<br>804<br>805<br>806<br>807<br>808<br>809<br>810<br>811<br>812<br>813<br>814<br>815<br>816<br>817<br>818               | FIBRINOPEPTIDES, BLOOD- COAGULATION FACTORS OR DERIVATIVES KININ OR DERIVATIVES PHECMYCIN SERIES OR DERIVATIVES ADRENOCORTICOTROPIC HORMONE OR DERIVATIVES SOMATOSTATIN OR DERIVATIVES OXYTOXIN, VASOPRESSIN OR DERIVATIVES CALCITONIN OR DERIVATIVES ENKEPHALIN OR ENDORPHIN OR DERIVATIVES ADDICTION .Alcohol .Narcotic .Tobacco ANEMIA .Sickle cell ANESTHETIC, GENERAL ANESTHETIC, TOPICAL ANTACID, ORAL                                       |

| 822 | ANTICOAGULATION                 | 876  | .Collar type                    |
|-----|---------------------------------|------|---------------------------------|
| 823 | ANTIDOTE                        | 877  | GALLSTONE                       |
| 824 | ARTERIOSCLEROSIS                | 878  | GERIATRICS                      |
| 825 | ARTHRITIS                       | 879  | .Senility                       |
| 826 | ASTHMA                          | 880  | HAIR TREATMENT (THERAPEUTIC-    |
| 827 | ASTRINGENT, NONFACIAL           |      | SCALP)                          |
| 828 | .Topical for the skin           | 881  | .Shampoo                        |
| 829 | BITE OR STING                   | 882  | HEMORRHOID PREPARATION          |
| 830 | .Insect                         | 883  | HODGKIN'S DISEASE               |
| 831 | .Animal (nonpoisonous)          | 884  | HYPOGLYCEMIA                    |
| 832 | BLOOD SUBSTITUTE                | 885  | IMMUNE RESPONSE AFFECTING DRUG  |
| 833 | BLOOD PLASMA EXTENDER           | 886  | INFLAMMATION, SKIN              |
| 834 | COAGULANT                       | 887  | .Topical Treatment              |
| 835 | CARIES                          | 888  | INFLUENZA                       |
| 836 | CHELATE                         | 889  | INTERFERON INDUCER              |
| 837 | CHOLERA                         | 890  | IRRITANT (E.G., TEAR GAS, ETC.) |
| 838 | CIRRHOSIS                       | 891  | KIDNEY STONE                    |
| 839 | CONTACT LENS TREATMENT          | 892  | LAXATIVE                        |
| 840 | .Chemical sterilizing           | 893  | LIVER DISORDER                  |
| 841 | CONTRACEPTIVE                   | 894  | .Hepatitis                      |
| 842 | .Non-mammal                     | 895  | MALARIA                         |
| 843 | .Female (mammal)                | 896  | MEASLES                         |
| 844 | COSMETIC, FACIAL                | 897  | .Rubella                        |
| 845 | .Liquid make-up                 | 898  | MENINGITIS                      |
| 846 | .Cleansing cream or lotion      | 899  | MENSTRUAL DISORDER              |
| 847 | .Facial moisturizer             |      | MOUTH TREATMENT                 |
| 848 | .Facial astringent              | 900  | .Periodontitis                  |
| 849 | COUGH AND COLD PREPARATION      | 901  | .Mouthwash                      |
| 850 | .Antitussive                    | 902  | .Gingival                       |
| 851 | CYSTIC FIBROSIS                 | 903  | MULTIPLE SCLEROSIS              |
| 852 | DANDRUFF                        | 904  | MULTIPLE VITAMINS               |
| 853 | DECONGESTANT                    | 905  | .With mineral                   |
| 854 | .Vasoconstrictor                | 906  | MUSCLE RELAXANT                 |
| 855 |                                 | 907  | MUSCULAR DYSTROPHY              |
| 033 | .Expectorant DERMATITIS         | 908  | LEUKEMIA                        |
| 858 | .Athlete's foot                 | 909  | OBESITY                         |
| 859 | .Acne                           | 910  | .Anorectic                      |
| 860 | .Acne<br>.Cellulitis            | 911  |                                 |
|     |                                 | 912  | .Bulking agent                  |
| 861 | .Eczema                         |      | OPHTHALMIC                      |
| 862 | .Poison (ivy, oak, sumac)       | 913  | .Glaucoma                       |
| 863 | .Psoriasis                      | 914  | Inflammation                    |
| 864 | Seborrhea                       | 915  | .Wetting agent                  |
| 865 | .Diaper rash                    | 916  | PYRETIC                         |
| 866 | DIABETES                        | 917  | RADIOACTIVE, ANTI-              |
| 867 | DIARRHEA                        | 918  | REPELLENT                       |
| 868 | DISTEMPER                       | 919  | .Insect                         |
| 869 | DIURETIC                        | 920  | .Mammal                         |
| 870 | EDEMA                           | 921  | SHOCK                           |
| 871 | .Topical                        | 922  | SIDE EFFECT REDUCTION BY        |
| 872 | EMESIS (MOTION SICKNESS-NAUSEA) |      | INCORPORATION OF A SECOND       |
| 873 | EMOLLIENT                       | 0.00 | DESIGNATED INGREDIENT           |
| 874 | ESTROGENIC AGENT                | 923  | SLEEP AID (INSOMNIA)            |
|     | (NONCONTRACEPTIVE)              | 924  | TUBERCULOSIS                    |
| 875 | FLEA CONTROL                    | 925  | ULCER TREATMENT                 |
|     |                                 |      |                                 |

| 926 | .Duodenal                         | 960    | SIGNIFICANT, TABLET FORMULATION                            |
|-----|-----------------------------------|--------|--|
| 927 | .Peptic                           |        | (E.G., DESIGNATED EXCIPIENT,                               |
| 928 | .Topical                          |        | DISINTEGRANT, GLYDENT OR                                   |
| 929 | VASODILATOR                       |        | LUBRICANT, ETC.)   |
| 930 | VASOCONSTRICTOR (NONDECONGESTANT) | 961    | .Binder therefor   |
| 931 | VENERAL DISEASE                   | 962    | CAPSULE (E.G., GELATIN, ETC.)                              |
| 932 | .Gonorrhea                        | 963    | .Microcapsule-sustained or                                 |
| 933 | .Syphilis                         |        | differential release                                       |
| 934 | .Virus                            | 964    | SUSTAINED OR DIFFERENTIAL RELEASE                          |
| 935 | UTERINE MOTILITY                  |        | TYPE   |
|     | LIQUID CARRIER, DILUENT OR        | 965    | .Discrete particles in supporting                          |
|     | SOLVENT                           |        | matrix   |
| 936 | DMSO CONTAINING                   |        | SUPPOSITORY, BOUGIE OR BASE                                |
| 937 | DISPERSION OR EMULSION            | 966    | RECTAL   |
| 938 | .Oil-water type                   | 967    | VAGINAL  |
| 939 | Mineral oil-water type            | 968    | URETHRAL   |
| 940 | Quick break type                  | 969    | OINTMENT OR SALVE BASE                                     |
| 941 | Polyoxyalkylated compound         |        | SPECIAL DESIGNATED INGREDIENT                              |
|     | containing                        | 970    | CONTAINING DESIGNATED INGREDIENT                           |
| 942 | Organic sulfonate, sulfate or     |        | TO STABILIZE AN ACTIVE                                     |
|     | sulfite containing                |        | INGREDIENT   |
| 943 | Higher fatty acid or              | 971    | .Crystallization point depressant                          |
|     | derivative containing             |        | or cold stabilizer containing                              |
| 944 | GEL                               | 972    | .Ultraviolet light stabilizer                              |
| 945 | FOAM                              |        | containing   |
| 946 | PENETRANT OR ABSORBENT (ENHANCES  | 973    | .Sulfur compound additive as                               |
|     | PENETRATION INTO SUBJECT          |        | stabilizer (e.g., sulfites,                                |
|     | TREATED)                          |        | etc.)  |
| 947 | .Topical application              | 974    | CONTAINING DESIGNATED INGREDIENT                           |
|     | SOLID CARRIER OR SOLID DILUENT    |        | TO REDUCE NOXIOUS EFFECTS OF                               |
| 948 | SOLID CANDY TYPE                  |        | ACTIVE INGREDIENT (E.G., TASTE                             |
| 949 | NATURALLY DERIVED CLAY (E.G.,     | 0.55   | MASKING, ODOR REDUCING, ETC.)                              |
|     | BENTONITE, ETC.)                  | 975    | CHARACTERIZED BY THE DESIGNATED                            |
| 950 | MACROMOLECULAR (OTHER THAN        |        | SURFACTANT USED  |
|     | SYNTHETIC RESINS)                 |        |  |
| 951 | POWDERS, GRANULES OR PARTICLES OF |        |  |
|     | SPECIFIED MESH OR PARTICLE        |        |  |
|     | SIZE                              | FOREIG | N ART COLLECTIONS  |
| 952 | .Wettable                         |        |  |
| 953 | SHAPED FORMS ADAPTED FOR          | FOR 00 | 0 CLASS-RELATED FOREIGN DOCUMENTS                          |
|     | NONINGESTIBLE USE OTHER THAN      |        |  |
|     | SUPPOSITORY TYPE (E.G., FILMS,    |        | reign patents or non-patent litera-                        |
|     | INSERTS, ETC.)                    |        | rom subclasses that have been sified have been transferred |
| 954 | .Ocular                           |        | Ly to FOR Collections listed below.                        |
| 955 | Biodegradable type                |        | Collections contain ONLY foreign                           |
| 956 | .Aural or otic (i.e., ear)        |        | s or non-patent literature. The par-                       |
|     | GASEOUS OR GAS EMITTING CARRIER   | _      | cal references in the Collection                           |
|     | OR PROPELLANT                     |        | refer to the abolished subclasses                          |
| 957 | VAPOR EMMITTING COMPOSITION       |        | nich these Collections were derived.                       |
| 958 | FOR SMOKING OR INHALING           |        |  |
| 959 | BREATHING GASES                   |        |  |
|     | PILL, LOZENGE, TABLET OR CAPSULE  |        |  |
|     |                                   |        |  |

DESIGNATED ORGANIC ACTIVE INGREDIENT CONTAINING (DOAI)

- .Heterocyclic carbon cpmpounds containing a hetero ring having chalcogen (i.e., O,S,Se or Te) or nitrogen as the only ring hetero atoms DOAI
- ..Hetero ring is six-membered
   consisting of two nitrogens
   and four carbon atoms (e.g.,
   pyridazines, etc.)
- FOR 100 ...1,2- or 1,4-diazine compound having two or more hetero rings (514/252)
- FOR 101 ....Hetero ring other than 1,2or 1,4-diazine is part of a polycyclo ring system (514/ 253)
- FOR 102 .....Diazine is bonded directly to the polycyclo ring system (514/254)
- FOR 103 ...1,4-diazines (514/255)
- FOR 104 HETERO RING IS FOUR-MEMBERED AND INCLUDES AT LEAST ONE NITROGEN ATOM (514/210)
- FOR 105 HETERO RING IS SEVEN-MEMBERED AND INCLUDES AT LEAST ONE NITROGEN ATOM AND AT LEAST ONE HETERO ATOM OTHER THAN NITROGEN (514/211)
- FOR 106 HETERO RING IS SEVEN-MEMBERED

  CONSISTING OF ONE NITROGEN AND
  SIX CARBON ATOMS (514/212)
- FOR 107 .Polycyclo ring system having the seven-membered hetero ring as one of the cyclos (514/213)
- FOR 108 ..Ring nitrogen is shared by two or three of the cyclos (514/214)

## DIGESTS

DIG 1 .RU 486 (i.e., RU 38486, RU 486-6, Mifepristone, Mifestone, Mifegyne, (11B-[4-(N, N-dimethylamino) phenyl]-17a-(prop-1-ynyl)-^4,9-estradiene-17B-ol-3-one, (11B,17B)11-[4-(dimethylamino)-phenyl]-17-hydroxy-17-(1-propynyl) estra-4,9-dien-3-one)